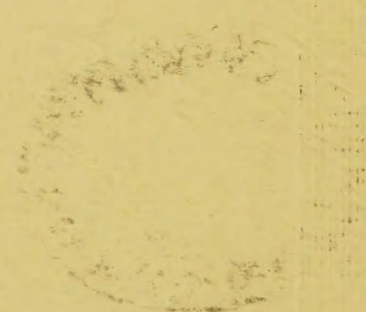
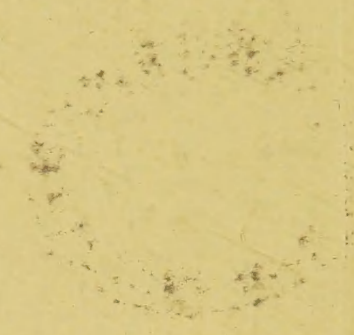
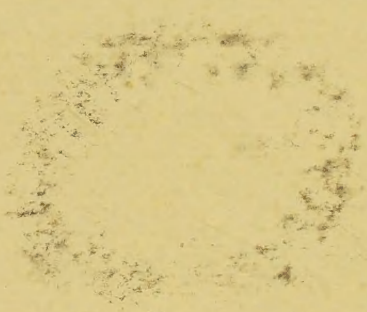


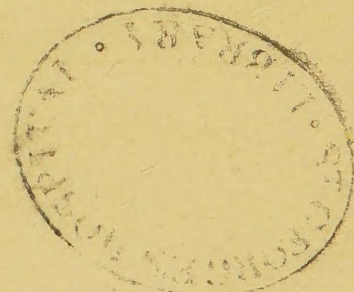
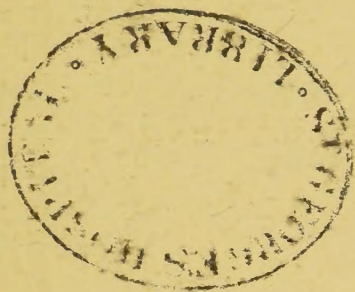



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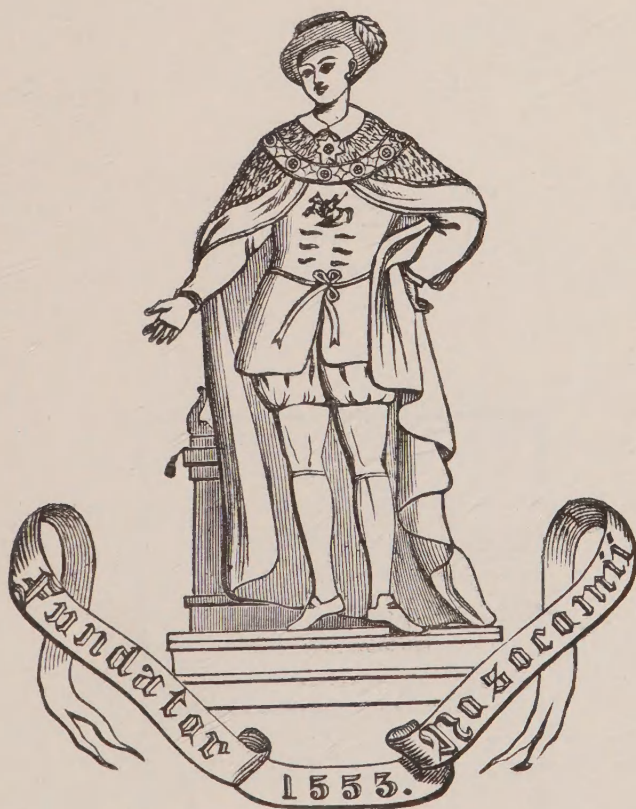
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REPORTS.

New Series.

EDITED BY
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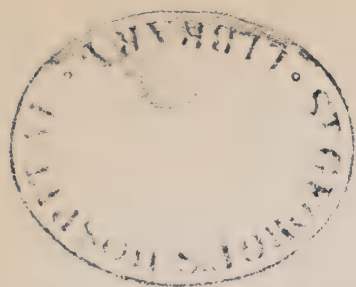
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DISEASE OF THE AORTIC VALVES

PROBABLY

ORIGINATING IN MALFORMATION.

By THOMAS B. PEACOCK, M.D., F.R.C.P.,
HON. CONSULTING PHYSICIAN TO THE HOSPITAL.

MARY ANN SIMS, æt. 11, residing at Hampstead, admitted into St. Thomas's Hospital under Dr. Peacock's care, March 19, 1875, having been ailing for about four years, but worse for between two and three months. It was stated at the time of her admission that about four years before she was confined to bed for two months with pains in the head and chest, but that she had never had rheumatism, and was healthy up to that time. She was suffering from attacks of sickness and retching, with shortness of breath, and had been under treatment at the Hampstead Consumption Hospital. Her mother died suddenly of hæmoptysis six years ago. Her father is living, and she has two sisters living, but lost a brother by some chest affection six years before. She has a pallid, puffy appearance, and the abdomen is tumid, but there is no decided dropsy. The tongue is clean and moist, pulse 112, somewhat feeble, respiration 32, hurried and irregular. The action of the heart is tumultuous and visible over a large space; there is decided prominence in the præcordial region. The dulness and percussion begins at the second interspace, and becomes entire at

the third. Laterally it commences to the right of the sternum, and extends beyond the line of the left nipple. At the base there is a systolic murmur, heard most distinctly at the right side and upper part of the sternum; it is short and rough, and is followed by a soft diastolic murmur which is propagated down the course of the sternum. Towards the apex there is a creaky murmur which is clearly of independent origin, and may be presystolic. It is not heard posteriorly. There may be a slight purring tremor felt at the apex.

On the 30th she is reported to have continued much the same. She had very little cough and no expectoration. She had the attacks of sickness occasionally, and sometimes brought up a little blood with the violent exertion. There was much sibilant and sonorous rhonchus in all parts of the chest. The physical signs continued as before, but there was no purring tremor to be felt at the apex.

April 20th.—She continued much the same, still suffering from occasional attacks of retching and vomiting. She only brought up some mucus, occasionally tinged with blood. The murmur heard towards the lower end of the sternum was short and terminated abruptly, and was probably presystolic; but at the apex it apparently became systolic, and was audible behind. The hepatic dulness was wide in extent, and the liver could be felt extending a considerable distance below the ribs.

30th.—She has been on the whole better; the attacks of retching have been less frequent but not less severe than they were. The physical signs are much the same, but the murmur towards the lower end of the sternum is characteristically presystolic, and is not audible posteriorly, but there is scarcely any thrill to be felt at the apex.

May 11th.—The sickness has been less, but she is much prostrated and very inert, being almost always asleep. The murmurs are less distinct, the action of the heart very tumultuous.

25th.—Condition much the same, except that she was losing strength.

On the 13th of June the dropsical symptoms had become more marked, and on the 28th, though the specific gravity of the urine still continued high, there was fully one-tenth of albumen.

On the 22nd of August, the abdomen having become very tumid, she was tapped ; $9\frac{1}{2}$ pints of fluid were removed, and on the 20th of September the tapping was repeated, and 10 pints of fluid were evacuated. She died on the 20th of October.

The post-mortem examination was performed by Dr. Greenfield the following day. The pleuræ contained much fluid, and the abdomen was much distended ; both lungs were compressed and œdematous. The liver was large, and weighed 3 lbs. 11 oz., and presented a marked nutmeg appearance. Spleen natural, somewhat firm, weighed $4\frac{1}{2}$ oz. Kidneys enlarged, very dense, weighed $8\frac{1}{2}$ oz. The capsules were slightly adherent, the surface was smooth. The cortex somewhat narrow and whole organs firm and dark, presenting appearances of chronic induration from congestion. The heart weighed the day after the examination and when deprived of coagula, $20\frac{3}{4}$ oz., and there were the remains of old adhesions on the surface of the pericardium, more particularly on the right ventricle and auricle, and between the pulmonary artery and aorta. The auricles and ventricles were much hypertrophied and dilated, and the lining membrane of the left cavities was somewhat thickened and opaque, and the mitral valve also was thickened.

The girth of the right ventricle was 79 Paris lines = 177.75 mm. and 6.94 in.

The girth of the left ventricle was 63 Paris lines = 141.75 mm. and 5.59 in.

The length of the cavity of the right ventricle was 51 Paris lines = 114.75 mm. and 4.52 in.

The length of the cavity of the left ventricle was 45 Paris lines = 101.25 mm. and 3.99 in.

The thickness of the walls of the right ventricle was at the base 3 Paris lines = 6.75 mm. and .26 in. ; at the midpoint 2.5 Paris lines = 5.62 mm. and .22 in. ; at the apex 2 Paris lines = 4.5 mm. and .199 in.

The thickness of the walls of the left ventricle was 5.5 Paris lines = 12.37 mm. and .48 in. ; 7.5 Paris lines = 16.87 mm. and 6.21 in. ; 4 = 9 mm. and .35 in.

The circumference of the right auriculo-ventricular aperture 45 Paris lines = 101.25 mm. and 3.99 in. ; of pulmonic aperture 39 Paris lines = 87.75 mm. and 3.46 in.

The circumference of the left auriculo-ventricular aperture was 33 Paris lines = 74.25 mm. and 2.98 in.; of aortic aperture was 30 Paris lines = 67.75 mm. and 2.66 in.

The right and posterior aortic segments were blended together, so that the aortic orifice had only two valves, and both of them were much thickened, and the united curtain dropped below the level of the other curtain, so that there was both obstruction to the flow of blood from the left ventricle into the aorta and regurgitation from the vessel into the ventricle. (See Plate.)

It will therefore be seen that the physical signs which had been observed during life corresponded with the condition of the heart found on examination, though from the uncertainty of the character of the apex murmur and of the purring tremor, the diagnosis of the mitral stenosis was less satisfactorily established, and, indeed, the constriction of left auriculo-ventricular aperture was only slight.

There are several points of much interest in this case.

1. It affords a very characteristic example of disease of the aortic valves originating in malformation, or at least in changes in the condition of the valvular apparatus probably occurring during intra-uterine life. I am aware that this view as to the adhesion of the valves, since I expressed it in the Croonian Lectures, delivered before the Royal College of Physicians in 1865, has been controverted, and by writers for whose opinions I entertain the highest respect; but, in the absence of any explanation which seems to me more feasible, I am disposed to retain my original views.

Fusion of the valves has been ascribed to the tearing down of the adjacent angles of attachment of two of the segments, while the rest of the curtain escapes laceration. There is no doubt that such giving way of the angles of attachment of the segments does occur, but certainly not frequently, and such accidents, when they do occur, are attended by symptoms which are quite characteristic; and the accident causes such serious interference with the functions of the heart as to be incompatible with the prolongation of life for any considerable period. In the present instance there is no history of any such occurrence, and the probability of its having occurred may safely be dismissed.

2. It has been supposed to be due to inflammation occurring after birth; but this would, I conceive, be necessarily attended by very marked symptoms of disease which could scarcely escape notice. The present patient had never had any such symptoms as far as could be ascertained, and though she had some swelling and pain of the ankles, which might probably have been rheumatic, that only occurred a year before her death and after the cardiac symptoms had manifested themselves. The fusion of the segments of the aortic valves is precisely similar to that which much more frequently is seen in the pulmonic valves, and which often coexists with other deviations from the natural formation of the heart, of the intra-uterine origin of which no doubt can be entertained, so that there is strong reason to regard the fusion of the aortic valves as also congenital, and, indeed, it has been occasionally found in foetuses which have never breathed, and frequently in infants dying shortly after birth.

3. Another interesting feature in the case was the peculiar attacks of retching and sickness under which the child suffered all the time she was in the hospital. These attacks occurred every two or three days, and without any reference to the times of taking food or to the character of the food taken, and nothing to explain them was found in the stomach after death. They could, therefore, only be supposed to depend upon reflected irritation from the cardiac disease.

4. A third very interesting feature of the case was the torpid condition of the child during the whole of the time she was in the hospital. Dr. Rossiter, the then house-physician, said he always found the child sleeping when he was in the ward. Her temperature also was throughout always low; at first it never exceeded 97.4° F., and was sometimes as low as 96° . In June it ranged between 98.5° to 95° , scarcely ever, however, reaching the normal standard. The only alteration which occurred towards the end of life was that it rose for a few days at the time when the child was first tapped, and again when the second tapping was performed. During the last weeks of the child's life it ranged from 98.4° to 96.7° and 95.5° .

I append a record of the daily temperatures.

Disease of the Aortic Valves

		A.M.		P.M.			A.M.		P.M.	
March	23rd	...	97.4°	...	96.8°	July	19th	...	96.2	
"	24th	...	97	...	97.4	"	20th	...	96	
"	25th	...	97.2	...	97	"	21st	...	97.8	
"	26th	...	97	...	—	"	22nd	...	97.4	
"	27th	...	97	...	—	"	23rd	...	99.3	
"	29th	...	97	...	—	"	24th	...	98.4	
"	31st	...	97	...	—	"	25th	...	98.4	
June	9th	...	96.4	...	—	"	26th	...	97.6	
"	10th	...	97.5	...	—	"	27th	...	95.3	
"	11th	...	96.7	...	97	"	28th	...	96	
"	12th	...	98	...	—	"	29th	...	98.2	
"	13th	...	98.5	...	—	"	30th	...	96.7	
Dropsical symptoms became marked.					"	31st	...	96.2	96.5	
"	14th	...	97.2	...	—	Aug.	1st	...	97.1	101.4
"	15th	...	—	...	97.3	"	2nd	...	96.4	96
"	16th	...	96	...	96	"	3rd	...	96.8	97.3
"	17th	...	96.2	...	96	"	4th	...	96.2	96.8
"	18th	...	—	...	96.8	"	5th	...	98.1	98.6
"	19th	...	95	...	97.2	"	6th	...	98	98
"	20th	...	96.2	...	97.6	"	7th	...	96.5	98.6
"	21st	...	96	...	97.1	"	8th	...	96.4	97.8
"	22nd	...	98	...	97.2	"	9th	...	96.4	98.5
"	23rd	...	96.2	...	96.4	"	10th	...	—	97.3
"	24th	...	96	...	—	"	11th	...	96.3	96.7
"	26th	...	95	...	97.6	"	12th	...	96.5	96.4
"	27th	...	95.8	...	98	"	13th	...	96.3	97.8
"	28th	...	97.5	...	97.2	"	14th	...	95.2	96.8
Albumen 1-10th.					"	15th	...	98.8	...	97
"	29th	...	97	...	98	"	16th	...	96.4	97.6
"	30th	...	95.8	...	98	"	17th	...	97	98
July	1st	...	97.4	...	95.6	"	18th	...	98.2	97.8
"	2nd	...	97	...	98	"	19th	...	99.6	98.2
"	3rd	...	96.2	...	98	"	20th	...	96.3	98.3
"	4th	...	97	...	96.4	"	21st	...	98.4	98.5
"	5th	...	97	...	97.2	"	22nd	...	98	98.9
"	6th	...	98.4	...	97.6	Paracentesis.				
"	7th	...	96.2	...	98	"	23rd	...	97	98.3
"	8th	...	98.4	...	98.2	"	24th	...	98.4	96.8
"	9th	...	95.6	...	96.2	"	25th	...	97	96.8
"	10th	...	96.2	...	96.2	"	26th	...	97.2	96.3
"	12th	...	97.2	...	98.6	"	27th	...	96.8	98.2
"	13th	...	96.2	...	99.3	"	28th	...	96.7	98
"	14th	...	99.3	...	97.6	"	29th	...	97.6	98.5
"	15th	...	96.8	...	98.2	"	30th	...	96.4	96.7
"	16th	...	96	...	97.6	"	31st	...	97.4	97.2
"	17th	...	97.4	...	98.1	Sept.	2nd	...	96.7	95.6
"	18th	...	98.2	...	97.8	"	3rd	...	96.4	95.6

		A.M.		P.M.
Sept. 4th	...	96·3	...	96·8
„ 5th	...	96·7	...	97·4
„ 6th	...	96	...	—
„ 7th	...	95·6	...	97·6
„ 8th	...	96	...	96·6
„ 9th	...	97·8	...	98·6
„ 10th	...	97·6	...	98·7
„ 11th	...	98·4	...	98·5
„ 12th	...	97·6	...	97·4
„ 13th	...	96·4	...	96·6
„ 14th	...	96	...	96·4
„ 15th	...	95·4	...	99·9
„ 16th	...	96	...	97·3
„ 17th	...	96·2	...	97·3
„ 18th	...	96·2	...	96·8
„ 19th	...	95·6	...	96·2
„ 20th	...	96·2	...	96·6
„ 21st	...	98·8	...	99·5

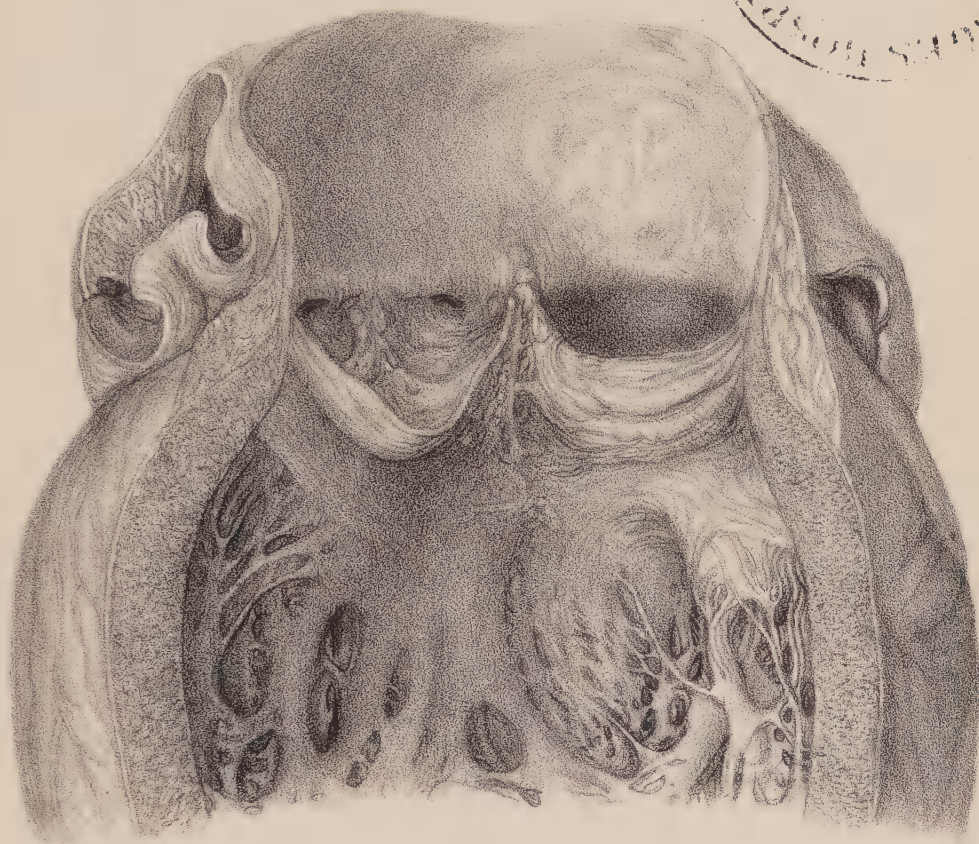
Paracentesis.

		A.M.		P.M.
Sept. 22nd	...	96	...	—
„ 23rd	...	95·6	...	96
„ 24th	...	95·4	...	97·4
„ 25th	...	100	...	96·5
„ 26th	...	96·5	...	98·4
„ 27th	...	97·4	...	97·7
„ 28th	...	97	...	97·6
„ 29th	...	96	...	96·3
„ 30th	...	96	...	95·7
Oct. 1st	...	95·7	...	96·6
„ 2nd	...	96	...	96
„ 3rd	...	96	...	96
„ 4th	...	96·7	...	97·2
„ 5th	...	96·7	...	97·2
„ 6th	...	98·4	...	96
„ 7th	...	96·6	...	98·4
„ 8th	...	97·5	...	95·5
„ 9th	...	96·6	...	—

EXPLANATION OF PLATE

Illustrating Dr. Peacock's paper on Disease of the Aortic Valves
probably Originating in Malformation.

It shows the adhesion of the right and posterior aortic segments forming one curtain which falls below the level of the other curtain.



Drawing to illustrate Dr Peacock's paper on disease of the aortic valves probably originating in mal-formation. — It shews the adhesion of the right and posterior segments, forming one curtain which falls below the level of the other curtain.






CASES

OF

ORBITAL CELLULITIS PRESENTING UNUSUAL FEATURES,

NARRATED AT TWO CLINICAL LECTURES GIVEN IN THE EYE
DEPARTMENT, ON NOVEMBER 17TH & 24TH, 1880.

BY EDWARD NETTLESHIP.

CASE 1.—*Relapsing double orbital cellulitis in a very gouty man; tendency to lymphatic inflammations; gonorrhœa several years before, but no syphilis; transient severe neuro-retinitis.*

Matthew Taylor A—, a stout, largely-built, intelligent man of 44, a baker, was sent to me at the Eye Department by Dr. Greenfield on April 24th, 1879, for my opinion as to the cause of the defective sight in his right eye.

$$V. \left\{ \begin{array}{l} R. \frac{20}{100}, \quad +\frac{1}{30} s \\ \quad \quad \quad +\frac{1}{36} c \end{array} \right\} \frac{20}{20} \text{ nearly, } +\frac{1}{15} s +\frac{1}{36} c = 1 J.^1$$

$$\left\{ \begin{array}{l} L. \frac{20}{70}, \text{ Hm. } \frac{1}{20} \\ \quad \quad \quad \frac{20}{20}, \end{array} \right\} +\frac{1}{14} = 1 J. \quad P. 8''.$$

The right disc, notwithstanding that acuteness of sight was almost normal, was decidedly pale all over and its substance opaque; the central vessels were normal and there were no

¹ But he complained that objects looked "dull" with this eye, and the pupil was larger than that of the other eye.

positive signs of previous neuritis. There was no colour defect. Satisfied that the optic nerve in this eye was diseased, I obtained the following history :

For about twelve years he had been subject to "gout" or "rheumatic gout," usually having about two attacks each year; and he was in fact at the present time under Dr. Greenfield's treatment for a passing attack. He had had gonorrhœa about twelve years before and had lately been troubled by a stricture, which Mr. Clutton had successfully treated. There was no history of syphilis.

Seven years ago he had an attack of inflammation of the eyes, in which the "whites of the eyes became red and were swollen over the pupil" (chemosis?) and he was unable to bear the light. He was taken to Moorfields, where he was told that he had "acute periostitis." The eyes recovered and remained well till eighteen months or two years ago (*i.e.* for a period of about five years), when he had another attack of the same kind. Since then they had been often rather blood-shot.

Though the man gave a very plain and graphic account, I must confess to having felt some doubt as to the correctness of his statements. However, just a week afterwards, on May 1st, he came back to me saying that he had got another attack of his "periostitis."

The right orbit was the one now attacked (the right disc was the one previously noted as pale). It had began two or three days before. There was much congestion, chemosis with some proptosis, and limitation of movement. Pupil inactive and, as at the former visit, rather larger than the left. He was in considerable pain, and pressure over the supra-orbital notch was painful, but pressing the eye back in the orbit was not markedly so. He was ordered five leeches, warm fomentations, and a purgative and alkaline mixture.

2nd.—Chemosis less. Three more leeches.

5th.—The left is now attacked. Three leeches to left temple. Atropine.

8th.—Left much worse; dusky swelling of lid, extreme serous chemosis, very little discharge. Conjunctiva snipped. Says his water is very thick. Omit atropine.

9th.—Three more leeches to left temple.

14th.—Sight of left now noted for first time, and found very defective; only sees 18 J. and is not improved by glasses. Disc moderately swollen and very hazy; veins dilated and tortuous; no hæmorrhages. (No note as to right at this date.)

14th.—Left improving, but movements of globe still restricted, and he complains of diplopia. There is now enlargement of the gland above the left elbow. (He also shows the scar of an abscess five to six years ago in the same part of the right arm, caused by an abscess in the finger.)

Sight of left still only 18 J. and $\frac{20}{100}$. Hm. $\frac{1}{20}$, but not improved. Pupils both act very badly to light; right $5\frac{1}{2}$ mm., left 7 mm.

19th.—Sight of left improving, 16 J. unaided, and 10 J. with $+\frac{1}{12}$.

22nd.—Left reads 6 J. with $+\frac{1}{12}$, but does not see the middle clearly. Pupils now equal, 3 mm., but dilate scarcely at all when covered. Inward movement of globe still defective. Considerable neuro-retinitis, with haze and swelling, extending some distance into the retina, veins abruptly kinked, arteries not diminished and pulsate easily on pressure.

On 28th it is noted that the left cornea was not anæsthetic; this had not before been tested. The sight of this eye rapidly improved, and on June 17th he read 1 J. fairly well with $+\frac{1}{11}$. There is no later ophthalmoscopic note of the left eye, and no note as to the condition of the fundus in the right during this attack, but the attack on the latter side was soon over.

CASE 2.—Inflammation in both orbits, probably cellulitis, possibly periostitis; temporary iridoplegia and amblyopia; perfect recovery; no proof of syphilis; severe gout in patient's father.

John S—, æt. 35, came to the South London Ophthalmic Hospital on January 8th, 1877, with slight proptosis and some redness and swelling of the ocular conjunctiva and of the eyelids; the condition was symmetrical, but worse on the right side. It had been coming on gradually for three weeks

on the right, and two weeks on the left side, and had been followed by some swelling of the cheeks, traces of which were still apparent. He had a good deal of pain in the temples, and pressure over the eyes was painful, but there was no tenderness of the accessible parts of the orbital walls. Pupils natural and sight said to be perfect (not tested). I thought there was some thickening of the roofs of the orbits.

He denied syphilis, and there was no history of injury or of erysipelas. No otorrhoea. Teeth of upper jaw perfect. I afterwards saw the eldest of his two children. It was weak and had had snuffles, but showed no certain evidences of syphilis. Other special senses perfect. He was a tall, bony, pale man, of rather flabby coarse skin.

Thinking it possible that he had some periostitis and that it was syphilitic, I ordered iodide of potassium in ten-grain doses, afterwards increased to twenty grains.

On the 13th the pain was worse and chiefly nocturnal, and he complained of giddiness and occasional diplopia. Walking and noise made the symptoms worse.

Vision now tested. Right 10 J., slowly. Examination showed all the retinal vessels, both arteries and veins, very large, but no other change.—Left 4 J. No ophthalmoscopic note. Pupils small and not acting either to light or accommodation. (From the later notes it is evident that the above difference in the sight of the two eyes was due chiefly to a higher degree of H. in the right.)

On the 20th it is noted that there was tenderness on pressing against the upper-inner part of each orbit, and I fancied that there was a diffused periosteal thickening there.

27th.—Sight rather better, right 8 J. slowly with $+ \frac{1}{13}$. left 2 J. unaided; ophthalmoscopic appearances of right as before.

February 10th.—There is less swelling. Has been having attacks of spasm of the lids and watering. Vision about the same. Is taking iodide of potassium gr. xx for the last ten days. Add grey powder gr. ij once a day.

By the 24th the symptoms had almost disappeared. Apparent thickening of bone at the upper inner part of orbit as on admission.

April 10th.—No active symptoms, but the left eye still slightly prominent.

In October, the left still slightly more prominent than right. The conjunctivæ of the eyeballs look rather loose and thickened.

Vision. $\left\{ \begin{array}{l} \text{Right } \frac{20}{70} \text{ Hm. } 2.5 \text{ D.} = \frac{20}{30}; 8 \text{ J. unaided.} \\ \text{Left } \frac{20}{30} \text{ Hm. } 1 \text{ D.} = \frac{20}{30}; 2 \text{ J. unaided.} \end{array} \right.$

There is no doubt that the sight was somewhat affected in both eyes during the attack, but the notes are not complete enough to show whether it was chiefly from failure of accommodation or from affection of the optic nerves. From the state of the pupils it seems likely that the ciliary nerves were for a time involved.

I saw him again in August, 1880, and found that no relapse had occurred and that vision had improved. Right $\frac{20}{40}$, Hm. 2 D. $\frac{20}{20}$. Left $\frac{20}{20}$, Hm. 1 D. Discs healthy; but pupils not noted. The apparent thickening of the orbit is as before, but on careful comparison with healthy persons, I doubt whether there is now or ever has been any morbid thickening.

I now questioned him particularly as to gout, in the light of the former case.

The patient himself has never had the slightest arthritic symptom, but his father, a painter, suffered severely from gout, being hardly ever free from it, and he also had colic severely.

CASE 3.—Severe cellulitis of one orbit, with neuro-choroido-retinitis ending in atrophy; three attacks in the same orbit; ? kidney disease.

Jane W—, æt. 36, married, came for advice about her right eye in May, 1879. Vision in this eye was reduced to counting fingers at 4', best on the temporal side, and there was no direct action of the pupil. The disc was very grey and surrounded by very large areas of choroidal atrophy with pigment accumulations, some of which were in the retina; the retinal vessels were not much altered. The left eye was perfect, and refraction normal.

She said that a year and three quarters previously she was treated at Moorfields for inflammation of the right eye. It began with pain when the eye was moved, followed in a few days by redness of the eye, pain in the head, and swelling of the eyelids; in a week the swelling was as large as an egg. At the end of about four weeks from the onset all the symptoms disappeared, but the sight was in its present state. No abscess formed.

She had been confined eight months before the attack, and two months before it had had "inflammation of the kidneys," and got very much out of health. (She subsequently brought her Moorfields letter, on which "cellulitis" was diagnosed, and detailed notes written. Severe neuro-retinitis was present early in the case; later some hæmorrhages, which finally gave place to pigment. The last note agreed with my own. The state of the pupils was not noted. The urine during her attendance at Moorfields is noted as healthy.)

Nine months after the above attack she had a second on the same side, and a third also in the same orbit, six weeks later. No note as to the gout.

CASE 5.—Unsymmetrical orbital cellulitis following severe sore throat; strangulation of vessels of optic nerve; recovery without suppuration.

Clara M—, æt. 12, was sent to me at St. Thomas's Hospital, by Dr. Chabot, on April 1st, 1880.

There was considerable protrusion of the right eyeball, with restriction of all its movements and partial ptosis; the ocular conjunctiva was swollen, particularly at the lower-inner part, where the swollen membrane formed a horizontal ridge; only slight discharge. The left eye was natural. Both pupils equal and active, and acuteness of vision normal in each eye. The ophthalmoscope showed extreme engorgement of the retinal veins in the affected eye, with some swelling, but very little haze of the disc or retina. She was thin and anæmic and ill. The glands under the jaw and in the neck were a good deal enlarged, more so on the side of the affected eye, and there were some enlarged glands (old) in the right groin.

The tonsils were red, but neither enlarged nor ulcerated. There was no evidence of lacrymal obstruction. She was taken into the hospital under the care of Dr. Bristowe. The same evening her temperature was 101.2° , pulse 96, resp. 30; the urine contained no albumen, and no visceral disease was detected.

It appeared on inquiry that she had been out of sorts all the previous winter, and had had chilblains and enlarged glands under the jaw. About a month before the eye symptoms came on her mother had brought her as an out-patient on the medical side. After one visit, a fortnight before I saw her, her mother thought she had caught cold; two or three days later her throat got very sore, then the right nostril became stopped up, the right eye began to protrude, and she became quite ill. It is probable from the mother's description that she had an abscess in the right tonsil. There was no history of diphtheria or scarlet fever either in the house or neighbourhood.

On April 5th all the eye symptoms were slighter, and by the 12th the proptosis had nearly disappeared, but as late as the 19th there was still decided engorgement of the retinal veins and slight prominence of the eye.

Once (about the 8th) there was a threatening of the same thing on the left side; some fulness and tenderness occurred along the left side of the nose, with pain in the eye and slight puffiness of the eyelids; but the symptoms went no further. She said that the first thing she had noticed before the attack on the right side was tenderness along the corresponding side of the nose.

Whilst in the hospital the morning temperature never reached 100° , but in the evening it was several times up to 100° and 101.5° . It became rather subnormal before she left.

Knapp has recently published a case of orbital cellulitis following diphtheria:—A boy, *æt.* 6, had severe diphtheria of the throat with great swelling of the fauces and an abscess in the right side of the soft palate. Then great swelling came on in the parotid region of the same side, with paralysis of the facial nerve and cellulitis of the same orbit. The symptoms of the orbital cellulitis were inflammation of the lids, proptosis,

early neuro-retinitis (œdema), and inflammation of the lids. The child died, but no post-mortem examination could be obtained ('Hirschberg's Centralblatt,' 1879, p. 97).

In the 'American Journal of the Medical Sciences' for April, 1880 (p. 429), Dr. Albert G. Heyl gives a case of "Metastatic Tenonitis in Diphtheria," which apparently belongs to the same group. A man, æt. 53, had a large diphtheritic patch on the left half of the pharynx, and became very ill. A week after he was first seen a large swelling appeared under the sterno-mastoid muscle on the same side, and at the same time the corresponding eye began to swell and project. Dr. Heyl was called in two days after these symptoms began, and found marked proptosis of the left eye, with chemosis and congestion, the pupils small, slight indistinctness of the margin of the disc, but neither then nor subsequently any decided changes; but after recovery there was some defect of sight. There was a brawny swelling under the sterno-mastoid, "evidently due to the enlarged lymphatic glands," and the patient was in a typhoid condition. The orbital symptoms quickly subsided, lasting only a week altogether, and he made a good recovery; in the absence of any further statement as to the swelling in the neck we may probably assume that it also disappeared without suppuration.

Heyl thinks that in this case inflammation extended from the diphtheritic ulcer to the deep lymphatics of the neck, and thence to the great orbital lymph-space or capsule of Tenon, which has been demonstrated by injections to be connected with the deep cervical lymphatics.

In connection with his own case, Heyl quotes a case by Imre ('Klin. Monatsbl.,' June, 1876), in which acute non-suppurative inflammation, beginning in the orbit, spread to the whole side of the face and temple, as a typical erysipelas. The orbital inflammation was considered as most likely a "tenonitis." It may be contrasted with the following:

CASE 6.—*Severe phlegmonous orbital cellulitis spreading from a swelling under the lower jaw; anæsthesia and destructive ulceration of cornea; history of severe traumatic ecchymosis of same eye three months before; ? renal disease.*

James C—, a short, puffy-looking costermonger, æt. 44, struck himself a severe blow on or about the left eye by running against the corner of a door. He stated that the eye was “very black,” and remained much swollen for some time. Nothing further seems to have happened for three months, when, without any apparent cause, swelling came on under the lower jaw on the same (left) side, and quickly spread upwards. This swelling began on a Monday evening (in October, 1878), and by the evening of the next Wednesday had reached the eyelids, so that he could not open them. The next afternoon (Thursday) Mr. Clutton brought him to me. There was brawny, dusky red swelling of the eyelids, chiefly of the lower eyelid, and at one part of the latter I thought, and I believe Mr. Clutton agreed, that distinct fluctuation was obtained. There was chemosis, with decided protrusion of the globe, and some limitation of its movements. I have no note of the sight or pupil, and did not make an ophthalmoscopic examination. A free incision was made into the most prominent part of the lower lid, but no more than a little shreddy discharge came away, either at the time or on subsequently deepening the wound. A drainage tube was inserted, but without effect, and the general swelling did not at all quickly subside. Two or three days after the incision was made, *i.e.* about six days after the attack began, the cornea had become anæsthetic, and soon afterwards it ulcerated, and was almost completely destroyed. He remained in the hospital for six weeks, and on leaving it he was suffering from much œdema of the legs. There are no notes as to the urine or as to the physical signs. The temperature was only once as high as $101\cdot6^{\circ}$.

ON TOPICAL APPLICATIONS

TO THE

CERVIX UTERI DURING PREGNANCY.

By HENRY GERVIS, M.D.

THE question has not infrequently been raised as to the propriety of making topical applications to the cervix uteri during pregnancy; and in the following brief remarks I propose to refer to some cases in which such applications are not only permissible but advantageous. Of chronic endometritis it is well known sterility is a not uncommon result; the unhealthy condition of the uterine mucous membrane and the general uterine hyperæmia occasioning difficulty in the fixation of the ovum. And where the endometrium is not so seriously affected as to prevent impregnation but is yet the seat of a certain amount of chronic inflammation early miscarriage is very apt to occur. Endometritis, indeed, both corporeal and cervical shares with flexions the chief responsibility in the production of early abortions. And I am not sure but that in cases of abortion said to be due to flexion it is not the associated endometritis which is the most active predisposing cause of the abortion. If, therefore, a patient come with a history either of sterility, or repeated abortions, and we find on examination the usual symptoms of endometritis obviously it is our duty to get the uterus into a

healthy condition both with respect to its capacity to permit and to retain a conception. But suppose a patient comes who is already pregnant, but with a history of having had previous abortions—and I have known in individual cases as many as fifteen due to this cause—and on investigation we find a more or less patulous os, its lips the seat of granular erosion, with mucus issuing from the interior of the cervix, and more or fewer of the usually associated conditions of endometritis such as uterine or ovarian tenderness and general pelvic discomfort, I believe that much may be done to improve the condition of the uterus, and so lessen and in many cases altogether prevent the risk of abortion. Indeed, I have known this result to be obtained in numerous cases. The usual local treatment of chronic endometritis consists in the application to the uterine interior, at certain intervals according to the conditions of the case and the nature of the solution used, of various solid and fluid substances such as nitrate of silver in stick or solution, tincture of iodine, glycerine of carbolic acid of varying strength, nitric acid, and the acid nitrate of mercury. And all of these but the two last I have used in different cases of endocervicitis in pregnant women with marked advantage, but of course with this distinct limitation that in no case is the application to be carried quite up to, and *a fortiori*, not through the inner os, or otherwise the very occurrence we are anxious to prevent is likely to be provoked. But it may be asked how can applications to the interior of the cervix even if they improve its condition, lessen a tendency to abortion which depends mainly on the condition of the endometrium itself. I apprehend the explanation is at least twofold. Just as there is a tendency for disease to spread by continuity of tissue so is it the case with returning health. The improved condition of the cervix promotes and carries with it an improved condition of the uterine tissues generally. And secondly, the cervix has well known reflex relations with the uterus itself, and by promoting a healthy condition of the cervix an important source of reflex uterine irritation is removed. In ordinary endometritis we usually make about three applications at intervals of a few days, after each period, the intervals being longer or shorter according to the strength of the application used, leaving at least a clear week before a period without applications. But in the endocervicitis of pregnancy the break

in the treatment necessitated by the recurrence of the catamenia does not occur, and the applications may be steadily continued until the object is attained. The applications are made in the ordinary way with the patient in the lateral position, through a bivalve or tubular speculum, and by a modification of Playfair's probe armed with a film of cotton wool dipped in the solution selected. In addition to the tendency to abortion induced by chronic inflammation of the endometrium there are at least two other diseases of pregnancy in which the treatment of endocervicitis when present will relieve and often cure. The first is sickness. Endocervicitis is certainly not present in all these cases, but in all cases of the sickness of pregnancy a scientific treatment includes an examination of the uterus, and if endocervicitis be present, in the great majority an amelioration of the local malady is followed by a diminution of the reflex disturbance. It is now known also that if there be sickness connected with anteflexion of the gravid uterus, the irritation due to tissue compression and in sequence the sickness may be relieved by careful dilatation even of the inner os, and that without inducing premature uterine action. I mention this merely by the way as an illustration not only of the dependence of sickness in some cases upon some pathological condition of the cervix but of the advantage to be derived from local treatment. The second class of cases in which the local treatment of endocervicitis during pregnancy is useful includes cases of pruritus accompanied by inflammatory swelling of the labia and of more or less of the vaginal mucous membrane. I have seen many such in which the irritation was extreme and in which an area of eczematous inflammation spread to the inner surfaces of the thighs and over the lower abdomen; in some of which every variety of lotion and ointment had been used and all sorts of medicine given, but without any relief until applications were made to the cervix itself. And then in proportion to the improvement in the cervix occurs an improvement also in the vulvar inflammation. I may add that this holds good also in many cases unconnected with pregnancy, and that often very intractable cases of vulvitis begin to improve when the associated endometritis is cured. I have also seen cases of endocervicitis during pregnancy in which there has been much abdominal tenderness and pain on locomotion, with impairment

of the general health, loss of appetite, and tendency to palpitation, in which the improved condition of the cervix attained by local applications has been followed by a subsidence of the uterine uneasiness and a general improvement of the health. As other illustrations of the impunity with which various operations may be performed on the cervix during pregnancy, I may refer to the cases recorded of removal of polypi and epitheliomatous outgrowths without labour being induced. In mentioning these four classes of cases, of threatened abortion with or without any history of its previous actual occurrence; of sickness, of pruritus, and of general uterine uneasiness with associated reflex neurotic symptoms, I wish merely to be considered as referring to cases, examples of which have not infrequently come under my notice, and not as excluding from treatment cases in which with other symptoms the same local condition is found to exist.

FURTHER REMARKS ON ANÆSTHETICS.

BY S. OSBORN, F.R.C.S.,
CHLOROFORMIST TO THE HOSPITAL.

BEING desirous of making a few alterations to the previous "Annotations on Anæsthetics," published in the 'St. Thomas's Hospital Reports' of 1880, I wish, at the same time, to add some further particulars which have since occurred to me.

The alterations which I have to make are neither important nor numerous, the substance of what I then stated I still adhere to; but finding that the above paper has been recommended as a practical guide to house surgeons, I wish to make a few additional remarks, due, in some measure, to suggestions made by kind and interested friends, and in part to further experience gained in the administration of anæsthetics.

When ether is to be given by Clover's portable regulating inhaler, two ounces of ether—this amount being equal to the contents of the small tin porringer placed in each box—will be found sufficient to commence with. For if the patient struggle, a larger amount will overflow and allow of the liquid ether to escape into the inhaling tube. After the lapse of ten to fifteen minutes the amount may be replenished by another half porringer full, and later on, if the operation be a long one, by

another half porringer ; but four ounces will generally be found sufficient for the longest operation. Ether of $\cdot 720$ sp. gr. is better than $\cdot 735$ as it combines better with chloroform and has less tendency to produce hyperæmia of the bronchial passages. Four parts of ether to one of chloroform is a very useful combination for eye or rectal operations, which require more profound anæsthesia. An improvised inhaler may be well contrived out of an inverted soda-water glass, in the bottom of which is placed a sponge covered by a napkin ; the latter, coming over the rim of the glass, is folded backwards on the outside.

Clover's gas and ether inhaler (Mayer and Metzler) has become now the favourite apparatus for the administration of anæsthetics in several of the London hospitals. Its mechanism being so constructed that it lies in the power of the administrator to give first nitrous-oxide gas alone, then a combination of gas and ether, and finally ether alone.

The advantage of quieting a patient preparatory to the giving of ether, by the administration of a few inspirations of nitrous-oxide gas is so very slight, that the usefulness of this inhaler is seriously counter-balanced by the increased cost of the instrument and its greater cumbersomeness, compared with Clover's portable regulating inhaler. Another advantage stated in its favour is that no ether is wasted, it being unnecessary to empty the cylinder after each operation, but only to close the stop-cock. But comparing the small amount of ether now required by either of Clover's inhalers in comparison to the large amount *wasted* by the use of other apparatus, this need hardly be mentioned, and taking into consideration the cost of nitrous-oxide gas, the expense of the administration far exceeds the saving in ether. Another point in favour of the portable inhaler is the larger graduated scale for the regulation of the volume of ether to be administered.

An objection I have heard raised against Clover's apparatus is, that there is necessarily a certain amount of carbonic acid poisoning. Such is undoubtedly the case, but the success of his inhalers is quite sufficient to override this objection.

Ethidene dichloride I have no experience of. The variability of its composition is the great objection to its use, and it is on this account that I prefer to use ether.

Protoxide of nitrogen, or nitrous oxide, or laughing gas (Messrs. G. Barth and Co.), is used principally for dental operations, where the extraction of teeth and such operations of short duration can be performed within a few minutes, for a prolonged use of this anæsthetic is dangerous, and therefore not applicable to any operation of magnitude, or rather of long duration, the two being almost identical.

Nitrous-oxide gas is given by Clover's combined inhaler, which I previously spoke of when describing the inhalation of ether. One minute is about the time occupied in producing insensibility with nitrous-oxide gas, or after three stertorous inspirations have taken place the patient will be found in a condition fit for operation.

Nitrous-oxide gas produces great congestion of the vessels of the face and head generally, shown by the lividity of the countenance, and also occasionally causes bleeding from the nose or even hæmoptysis. Therefore, in a case of severe disease of the arterial system, such being operated upon for ligature of a vessel for the cure of aneurism, I should not administer gas prior to the giving of ether.

In some patients where anæsthetics have been taken badly on a former occasion, small doses of ether and chloroform taken internally have been recommended with a view of getting the constitution accustomed to these drugs.

When giving anæsthetics, the head of the patient should be kept on a level with the body or on a gradually inclined plane, not doubled forwards by too great a number of pillows under the head, for by so doing curves are made in the windpipe, but let the exit from the lungs to the mouth be in one straight line.

To know when the patient is sufficiently under the influence of any anæsthetic for the operation to commence, the conjunctival surface should be touched with the tip of the finger, and if no reflex action takes place, shown by the contraction of the orbicularis palpebrarum muscle, a sufficient degree of insensibility has been produced. The corneal surface of conjunctiva is more sensitive than that covering the sclerotic; therefore, if the latter shows insensibility when touched the anæsthesia will be found sufficient for ordinary purposes; insensibility of the

former being, of course, required for operations upon the eye itself. It must be borne in mind, however, that the conjunctival surface repeatedly touched by the finger eventually loses its sensibility. This fact must be borne in mind by the chloroformist, and first one eye and then the other be touched, or a false impression that the patient is thoroughly anæsthetised may be conveyed. Paralysis affecting one side of the body may also occasion loss of sensibility of one conjunctival surface.

Dilatation of the pupils is a sign of the anæsthetic having been pushed to a sufficient extent, and the inhaler should be immediately removed from the face.

Flaccidity of the limbs is no sign of cutaneous insensibility.

How long does it take to get a patient under the influence of an anæsthetic?

Nitrous-oxide gas will produce insensibility in one minute, but the effect being so transitory it can only be given for operations which can be completed in five minutes. Ether given by any open inhaler will not produce insensibility under eight or ten minutes; when given by Clover's portable inhaler, insensibility can be produced in from three to four minutes, and when preceded by a few inhalations of nitrous-oxide gas in from two to three minutes. But if nitrous oxide is not used the space of time occupied in producing insensibility is the same in both of Clover's apparatus. The time occupied, however, and by any apparatus, is always shorter in the warm weather, and a longer time is required for persons of strong constitution or accustomed to much alcohol. The amount of the anæsthetic required varying in a corresponding degree to the vital capacity of the patient.

Chloroform, when used in children and old people, produces insensibility in about two minutes or rather less.

How long may a patient be kept continuously under the influence of an anæsthetic?

Nitrous-oxide gas, as was previously mentioned, can only be given for a space of one minute, therefore ether or chloroform is used when duration is of consequence, and of the two I undoubtedly give the preference to ether on account of its being a vascular stimulant. Two hours and fifteen minutes is the

longest time that I have given ether continuously, but even then after discontinuing the application of the mouth-piece the patient was, of course, considerably longer in a state of unconsciousness, although not entirely insensible, as shown by touching the conjunctiva. In cases where anæsthesia is kept up for a long period, shock, partially due to the anæsthetic and partially due to the operation, is developed to a greater or less extent, shown by coldness of the surface of the body and extreme prostration. This is best combated by the application of a warm-water bottle to the cardiac region, and subsequently, when the operation is completed, by an egg-and-brandy enema.

Some peculiarities occasionally occur during the administration which are interesting and should be known to the administrator. The inhalation of ether frequently produces exanthematous patches on the face and upper parts of the body, and I have known a case to be removed from the operating table under the impression that the patient was suffering from one of the eruptive fevers and unfit for operation. The origin of this phenomenon is to be found in paralysis of the vasomotor nerves by the anæsthetic. I should mention also that if any skin eruption is present it is made by the same cause more prominent.

A false impression when feeling the pulse may be very easily conveyed, as in a case I remember where the patient, lying upon the arm, compressed the main artery and stopped the pulse greatly to the consternation of the anæsthetist. The case was one of removal of a tumour from the right scapula, the radial artery being abnormally situated and absent on the right side; the patient was suddenly brought over on to the left side for the convenience of the operator, and the left radial was stopped by compression from the weight of the body.

Elevation of the jaw, by pushing the angle of one or both sides forwards, acts upon the tongue and gives freer respiration. The converse also is easily seen, as I have frequently demonstrated to the students, that by pushing the lower jaw backwards, the breathing can be immediately impeded or altogether arrested. As it is difficult to raise the jaw, both hands being occupied, one holding the pulse and the other the inhaler, I have devised an underchin support which I call jaw compasses,

being of that configuration, for the purpose of going behind the angles of the jaw and drawing them forwards and upwards. The administration by this procedure being considerably assisted. A circular india-rubber band, similar to that used for keeping letters together, passed over the nose-piece of the inhaler and under the symphysis of the chin, will also answer the same purpose.

The administration of anæsthetics for cases to be operated upon for the cure of cleft palate are always troublesome, and it is usually found that chloroform for these cases is best. Ether causes not only an increased secretion of saliva, but also increased vascularity, and the mouth being wide open, patients return to consciousness sooner than when chloroform is given. Another difficulty in these cases is the insertion of the mouth-gag, the breathing on its insertion becomes immediately impeded by the tongue being thrown backward at the same time as the lower jaw is depressed. A good mouth-gag is much wanted, its requirements being to keep the mouth open, to draw the tongue forwards, and to push the lower jaw forwards. The one that most fully meets these requirements is described in the 'London Medical Record' (April 15th, 1881).

The use of chloroform is necessary for all operations upon the interior of the mouth (removal of tongue, &c.), for the same reasons as mentioned when speaking of cleft palate. When the mouth has to be kept open for some time, I frequently use Clover's chloroform bellows manufactured by Messrs. Coxeter & Son, whereby a mixture of chloroform and air is blown down the back of the throat.

The question whether anæsthetics should be given at all in eye operations is a debatable one, the vomiting from chloroform and the vascular turgescence from ether being the objections to their use. I consider that anæsthetics are always necessary for ophthalmic operations upon children, but never for adults, except in cases of enucleation and for operations upon the eyelids.

Chloroformists should not administer anæsthetics for too long a time at one sitting, for the administrator after giving anæsthetics for two or three hours consecutively, becomes somewhat anæsthetised himself and lacks that amount of vigilance which

he had at the commencement, and ought to have throughout the whole of the administration. This is more especially the case when open inhalers are used. There is in addition great mental strain to the administrator from the anxiety and constant watchfulness entailed.

The element of danger is more often present in rectal operations. Why I cannot say ; but undoubtedly I have had and others also, more anxiety over the administration of anæsthetics in these cases. Whether it arises from the fact that *all bloodless operations are dangerous in plethoric individuals*, or whether diseases of the bowel are unusually depressing, and that the highly sensitiveness of the rectum requires a greater degree of anæsthesia, I am not in a position to say, but the fact remains the same.

In cases of stoppage of the heart's action, in addition to percussion of the heart with the wetted end of a towel, artificial respiration must be immediately commenced, because the stoppage of both factors would make up the whole fatality. Inversion of the body should be always tried if stoppage of the heart's action occur. The head being lowered and the legs elevated the blood is sent to the upper part of the body ; a similar effect is produced but less quickly by the application of bandages up the legs. The latter may be adopted with great advantage in operation about to be performed upon anæmic patients. Inversion of the body should be maintained until the heart's action is resumed, for success has been found to follow this procedure.

The post-mortem appearances of fatal cases show that hepatisation of the lungs with adhesions to the pleural surface, or a fatty heart, or one having adhesions to the pericardium, are more especially antagonistic to successful anæsthesia.



ON SOME CASES

OF

PAROXYSMAL PYREXIA SIMULATING AGUE.

BY WILLIAM M. ORD, M.D., F.R.C.P.

THE recent occurrence in the wards of two cases of paroxymal pyrexia, in one of which ague was simulated, but in neither of which was it present, induces me to record the cases in the Reports, and to compare them with some others which have come under my observation.

The first case must be given at some length, owing to the great variety of symptoms and morbid conditions associated with the supposed ague.

J. J—, a farm labourer, residing at Southborough, near Bromley, in Kent, was admitted into St. Thomas's Hospital, under my care, on the 20th March, 1880.

He was a well-made and fairly nourished man, strongly anæmic, with a faint yellow tinge of the skin, very prominent eyeballs, and clear conjunctivæ. He had never been abroad; had, indeed, always lived in the neighbourhood of Bromley, excepting that in 1879 he stayed at Rotherfield, in Sussex, for six weeks. Neither of the districts mentioned is, so far as I know, malarious. He stated that he had always been pale; that he had never had scarlatina; that he had had rheumatic fever at the age of seventeen, without suffering subsequently from any shortness of breath; that he had never had syphilis.

He had in fact believed himself to be quite well up to

Christmas day last, when he felt out of sorts. The next day he was seized with a "shivering-fit" which lasted from 8 p.m. to 10 p.m. and was followed by heavy perspiration. The fit recurred the next night at the same hour, and so on daily for a fortnight. After this he shivered every other evening; later on every third day; and sometimes at longer intervals. The last fit occurred on the day before his admission. During this time his appetite remained fairly good, but he was very thirsty. He supposed himself to be suffering from ague, which had, however, resisted the ordinary treatment.

When admitted he was not very weak, but was breathing quickly. It was noticed that his fingers were much clubbed; that he had a scar of injury on the right cornea, and an oval scar, also referred to an injury, over the right tibia. There were no scars of chancres or buboes. He complained of pain in the left calf, which was slightly swollen and very tender. There was no inflammation or distortion of any joint.

The heart was distinctly enlarged, but there was no evidence of pericardial effusion. There was a marked presystolic thrill over the impulse; a systolic murmur at the apex, conducted into the left axilla; and a fainter, apparently independent, systolic murmur over the aortic valve; the arteries were everywhere much thickened, and the pulsation of brachials and radials was clearly visible.

The lungs and pleuræ were clear.

The liver was somewhat, the spleen considerably, enlarged; both organs were unduly firm to the touch, but not tender.

The urine was of 1015 sp. gr., smoky, very albuminous, and contained free blood, with hyaline, granular, and epithelial casts. The blood contained a decided increase of white corpuscles.

On the day after admission his temperature was 98° early in the morning. He began to shiver at a little before 11 a.m., and by 2 p.m. the temperature was 104° ; he then perspired freely and the temperature sank, somewhat slowly, till at 7.30 it stood at 99.2° .

The next evening he was chilly at 9, the temperature being 98.4° ; at midnight the temperature was 102.3° , and it remained at that height for some hours. He began to perspire at 5 a.m. and at 8.10 the thermometer did not rise above 99.3° .

In this way his temperature went on, rising after rigors and falling with perspiration, during the whole time of his stay in hospital, rather more than five weeks, at the end of which he died.

During the whole period the liver and spleen remained large, and the spleen was tender for one week shortly after his admission. The pain and tenderness in the left calf persisted, but no hardness accompanied the slight swelling; there was no other evidence of phlebitis, none of suppuration there or elsewhere. The urine continued always in the same state.

But the breathing became steadily worse, and he had pain in the region of the heart about ten days after admission. The pericardium then became distended and friction was distinctly heard over the front of the right ventricle. A tricuspid murmur also came into play, and the second sound of the heart became excessively accentuated over the pulmonary artery. No effusion could be detected in the pleura, but signs of œdema of the lungs appeared and increased from day to day. The pericardial friction was not heard after a few days, and the amount of pericardial effusion varied a good deal, though the marks of it were always present. The tricuspid murmur became more and more distinct, and pulsation of the veins of the neck, not at first perceptible, was plainly seen by several observers four days before his death. Vomiting occurred on the day of his admission, the ejecta being tinged with blood. It recurred the day before death. He was troubled with diarrhœa for a few days, but the stools had nothing of a typhoid character.

At the post-mortem examination the following lesions were found :

1. Pericardial effusion (15 oz.), with no deposit of lymph in heart or pericardium.

2. Dilatation of both ventricles with hypertrophy of the left.

3. The posterior set of chordæ tendineæ of the mitral valve were ruptured, their ends clubbed, and covered by dark clot. The endocardium showed a white tract where the free ends would have played against it. The rest of the valve was natural. There was no effusion in pleuræ; nothing but congestion and œdema in the lungs.

4. The liver was large, but not obviously diseased.

5. The spleen was large, much congested, and friable; there was an old infarct of considerable size near its lower border.

6. The kidneys were large and pale on section, being good specimens of the large white kidney of chronic Bright's disease.

7. The stomach and intestines were healthy.

8. The joints were healthy. No lesion could be discovered in the left calf; no suppurations or embolisms were found anywhere save what was noted in the spleen.

When the patient was admitted the diagnosis appeared to lie between ague, suppurative phlebitis, pyæmia, and ulcerative endocarditis. There were certainly no signs of enteric or of relapsing fever, none of tuberculosis or lymphadenoma, none of syphilis, none of obstructions in the urinary or biliary tracts.

From his previous history ague was not indicated, but there being enlargement of the spleen, quinine was freely administered for a fortnight. At the end of that time the pyrexia was unchecked and new symptoms had appeared.

The most careful examination of the left calf and of the body generally failed to detect any sign of suppuration. But this could not be held decisive at first, and it was not possible to the last to exclude this cause or pyæmia, particularly in face of the state of the urine. But the steady development of new mischief in and about the heart pointed more and more to the probability of the existence of ulcerative endocarditis. Iodide of potassium was given for ten days without effect, and subsequently salicylate of soda proved equally useless.

When the post-mortem examination had enabled us to see what lesion existed, it was still not by any means certain what was the cause of the intermitting pyrexia. On the whole, I refer it to the state of the mitral valve setting up from time to time excitement in the heart and, through the heart, in the nervous system.

The next case to which I will refer is that of J. B—, a railway guard, aged fifty-nine, under my care in St. Thomas's Hospital in May and June last.

He had been a railway guard for thirty years, and had never been out of England or lived in malarious districts. Formerly he drank rather heavily, but for four years had been perfectly temperate.

One evening, eight months ago, he was seized with pain in the belly, which became more severe the next day. On the third day he became deeply jaundiced, and has been so ever since. He vomited a great deal during the attack, and when he became yellow he found his motions become pale. A day or two later the motions resumed their natural colour, and the tint of his jaundice became paler. He had subsequently many attacks of a like kind, but after a time they changed in character, shivering and sweating taking the place of the severe pain.

When admitted he was jaundiced, and had much itching over the whole body. The liver was much enlarged, but was neither painful nor tender; there was no enlargement of the spleen or tenderness in the splenic region. The tongue was covered with a white fur, the bowels rather confined, and the motions at present were of a rather pale brown colour. The temperature was normal, and no disease or change in other viscera than the liver could be detected.

On the eighth day after his admission he was seized with shivering, vomiting, and a little pain in the right side. After the shivering he became hot and perspired freely, and the temperature rose from 98.7° to 101.4° . He was deeply jaundiced next day; the urine was loaded with bile pigment and, what is in my experience a very rare occurrence, gave a marked reaction with the test for bile acids; the motions were pale, but the temperature became natural. Eight days later he had pain in the epigastrium and heavy perspiration, without shivering or sickness; the temperature rose to 101.4° , and he was more yellow next day. Eight days was in his opinion his regular period of intermission, but he now went on for twelve days without an attack. The next attack was less severe than the preceding, being attended by neither rigor nor vomiting, and the temperature reaching only 100.6° . He remained in hospital three weeks longer, and had no more attacks. During the whole of his stay the motions were regularly sifted for gall-stones but none were found. The symptoms from the first pointed clearly to the existence of gall-stones, probably impacted, either sticking in the vesical duct or not completely blocking the common duct; with this there was abundant evidence of gastro-duodenal irritation. The treatment was therefore directed to

the digestive organs. For the relief of his constipation he had at first pills of ox-gall and aloes, which acted very well. Subsequently he took a drachm of sulphate of soda, and ten grains of the bicarbonate in hot water twice a day for three weeks. He was carefully dieted, at first on milk and broths, then on soft solids, and at the end of a month was able to take meat without inconvenience. He went out much improved in strength, and having gained slightly in weight.

The third case is that of a lady, aged fifty-eight, who had passed most of her life in the Mauritius. After being free from any kind of malarious illness during her residence in that island she came to England, and before long began to suffer from what was called "fever and ague." She used to have shiverings, heats, and sweatings at irregular intervals. At first these were unaccompanied by pain, but presently a pain increasingly severe and attended with vomiting was felt in the left iliac region. The seizures continued for months, and were regarded as an outbreak of ague latent during her residence abroad. Quinine and arsenic were poured in without avail, till one day, after a paroxysm of extraordinary severity, she passed a stone the size of a bean from the bladder. Instant relief followed, and six months have since passed away without any return of fever or sweating.

Lastly, I will relate shortly a history which has interested me very deeply. A gentleman, of the age of thirty, who had never lived in the tropics, suffered from daily attacks of high temperature with shivering and sweating. I was called to see him, and found a sallow, worn, emaciated man, with some enlargement of liver, none of spleen, no indications of disease in other viscera, with marked traces of severe primary, and a history of secondary, syphilis. On careful examination I could not satisfy myself that he was suffering from malarious fever, and set to watch him in order to find out if there were any local source of mischief—an abscess or the like. Meanwhile he took quinine in large doses, and the fever was much reduced, but only for a time. The temperature, at first checked, rose again, and the whole symptoms were in process of full development, when Sir William Jenner, who replaced me in consultation, suggested that the syphilis might be the cause, and advised a trial of iodide of potassium. Thirty grains were

given daily, and after two days of this treatment the temperature fell and the rigors, &c., ceased. So far as I know they have not returned.

Here, then, we have four cases of paroxysmal pyrexia in which malarial poison was to all appearance not present, in which, on the contrary, four several and distinct causes of the phenomenon were indicated. The necessity of diagnosing the cause of a paroxysmal pyrexia may not occur very often, but judging from my own experience it falls to most of us at long intervals. It is clear that our treatment can only be effective when our diagnosis is correct. The four causes illustrated by my cases are far from being the only possible causes besides ague, which have to be considered in arriving at a diagnosis. The late Dr. Murchison, in one of his last published clinical lectures, enumerated as many as twelve possible causes, namely :

1. True ague.
2. Enteric fever.
3. Relapsing fever.
4. Pyæmia.
5. Pent-up pus.
6. Ulcerative endocarditis.
7. Tubercular fever.
8. Lymphadenoma.
9. Syphilitic fever.
10. Urinary intermitting fever.
11. Hepatic intermitting fever.
12. Morphia.

We cannot now consider these in detail, but we may well recognise and bear in mind, when we have what is called irregular ague brought to us for treatment, the possibility of the case not being ague at all but of one of the other eleven. For instance, we shall be careful to search for signs of abscess in all and every part of the body, to examine the heart for indications of the state of the valves, the lungs for indications of tubercle, the genitals for indications of syphilis. Even where there is a strong primary probability of the presence of malaria, as in the third of my cases, it is quite possible that some other agent may bear the actual guilt. Two years ago I witnessed the case of a distinguished Indian officer who had intermitting pyrexia, first attributed to malaria, next to hepatic abscess, and at last

proved to be attributable to neither of them, but simply to impacted biliary calculus.

DETAILS OF CASES 1 AND 2.

CASE 1.—*Ulcerative endocarditis.*

Jasper J—, æt. 23, farm labourer. Admitted 20th March; died 27th April.

Family history.—Father alive and healthy; mother alive, but ill of heart disease. They have had fourteen children: six alive, the rest died young.

Previous history.—Has always been pale. Never strong framed. Had rheumatic fever when 17; has not had dyspnœa since; never had coughs. Never abroad; always lived in Kent, except in 1879, when he went to Rotherfield, in Sussex, and stayed six weeks.

Present illness.—Quite well up to Christmas Day, 1879. The next day was out walking, and before he came home he had a shivering fit, lasting from 8 p.m. to 10 p.m. When he got home he went to bed and perspired a deal; slept fairly; got up next morning and went to work, but returned home about five o'clock because he felt ill; went to bed, and again shivered and sweated. After this he gave up work and remained at home, not keeping to his bed, but going out of doors occasionally. During the next two weeks he shivered every evening between eight and nine o'clock; he perspired some time afterwards and also in the morning. At the end of a fortnight he shivered on alternate evenings only; he always perspired afterwards and passed much water. He never felt hot after the fits of shivering, but felt very cold at the beginning; nothing could make him warm, though he remained in front of the fire. At the end of a month he had attacks at intervals of three days, and sometimes of a week. The last he had was on Saturday March 19th. All this time his appetite was fair, but he was very thirsty.

State on admission.—Lips anæmic. Clubbing of fingers. Waxy appearance of skin. Scar on right cornea, with cataract, resulting from injury. He complains of "ague fits" and pain in left calf. No œdema of ankles. No distortion of metatarso-phalangeal joints. One oval scar on front of right tibia, said to be from injury. Left calf tender. Chest well formed. Respiratory movements sluggish. Comparative dulness at left apex; vocal resonance equal to right. A little pulsation in epigastrium.

Heart.—Apex 5—6 ribs, two inches below nipple, just outside

its vertical line; dulness extends four inches from mid-sternal line; slight presystolic thrill. Systolic murmur at apex, propagated into axilla. Faint but independent systolic murmur at base; over pulmonic area, second sound very loud and reduplicated. Arteries thick, visible pulsation in arms.

Liver.—Sixth rib to one inch below arch in nipple line.

Spleen.—Dulness from four inches above costal margin to one and a half below.

Tongue.—Thin yellow fur; moist; pale.

No vomiting except on admission, when he brought up blood. Bowels regular. No headache. Sleeps badly.

Urine.—1015; smoky; free blood; hyaline, granular, and epithelial casts. Some epithelium from pelvis of kidney. Slight indigo reaction.

Blood contains some increase of leucocytes—about thirty in the quarter of an inch field.

March 23rd.—About the same. No feeling of chilliness. No shivering. Appetite good. No pain in calf when he got out of bed to be weighed. No pain or tenderness in any joint. Temp. at 2 a.m. 103·4°, at 8 a.m. 98·6°, at 10·30 a.m. 99·5°. Weight 9 st. 3½ lbs. No pain anywhere. Tongue somewhat furred. Perspired yesterday about 6 p.m. Pulse 102, regular. Urine 1015, albumen, blood, few casts.

24th.—No pain in any joint. Sounds over heart's base very rough on left of sternum, rather increased by pressure. No friction over lung bases.

25th.—Feels better; no pain; appetite good. No more attacks of shivering. Temp. last night 100·5°. Perspired yesterday evening. Heart's dulness up to second space; no fulness in knees; no pleural effusion.

26th.—Dulness down again to lower border of 3rd left costal cartilage. No effusion in pleura or joints. Still roughness of sounds over pulmonic area, independent of murmur at apex, which is heard very distinctly over left back.

27th.—Complains of pain in region of heart and palpitation, also in situation of lower edge of spleen; no tenderness. Over heart base is a harsh friction murmur. No pain nor swelling in any joint. No effusion of pleura.

29th.—Slight thrill over base of heart, independent of that at apex. Dulness up to second space. Friction less pronounced, but still present. No effusion in knees or pain in any joints. Some friction over left lung with feeble breath sounds.

30th.—Over lower half of left lung, at end of inspiration, is a clicking crepitation sound, with vocal fremitus and resonance increased in this situation. Heart dulness down to third rib. No effusion in joints.

31st.—Some dulness in second space. Vocal resonance more increased in left base. Pulse 132. Respirations 40. Shivered this morning.

April 1st.—Severe fit of shivering this morning from seven to nine, not followed by any sweating. Spleen harder; not so large; not tender. No effusion in joints; feels better on the whole. Temp. during rigor 101°.

2nd.—Chill this morning, but no distinct rigor; feels very hot; passes much water after chills. Cardiac dulness up to third rib. No tenderness over spleen or liver. Bowels open.

3rd.—No chill.

4th.—Slight chill.

5th.—Slight chill this morning; feels much better; no effusion nor tenderness.

6th.—Feels much better. Not so thirsty. Slight chill this morning. Urine 1015, small amount of albumen.

7th.—Very slight chill. Perspired very freely during night.

8th.—Fit of shivering this morning, lasting half an hour. Urine, sp. gr. 1013, some albumen; 3 pts. 11 oz. passed in twenty-four hours.

9th.—Rigor commenced at 6 a.m.; continuing to 10 a.m., though not so severe as at first. Has had great sensation of cold and "creeping" since attack commenced. Perspiration not so profuse as usual. Towards lower end of sternum, over region of tricuspid valve, is a murmur distinct in character from that at apex. It is musical, and occasionally there is a distinct second element or flap. No venous pulsation detected. Not examined posteriorly on account of his sweating.

10th.—Feels rather better. No shivering or perspiration. Throat sore. More cough, with considerable expectoration. Urine 2 pts. 13 oz. Marked presystolic thrill at apex; there is also a pericardial rub, heard loudest at base, but also propagated down sternum, and increased on pressure. The mitral murmur is distinctly heard posteriorly in a line with vertebral column.

13th.—Says he cannot sleep well owing to troublesome cough. No shivering; no perspiration; sputa less livid, more frothy; less tinged than before.

14th.—Pain in cardiac region; cough more troublesome; sputa frothy, viscid, and tinged with blood. Pain in knee-joints. No swelling or redness about joints.

15th.—Feels better. No shivering; no perspiration. Cough less troublesome. Sputa less viscid. No pain in knee-joints.

19th.—Diarrhoea; bowels open three times in the night and twice yesterday. Complains of pain on the inner side of both knee-joints.

22nd.—Feels better. Bowels moved once during the night. No pain in knee-joints, Sputa watery, partly muco-purulent.

23rd.—Shivered during the night; also profuse sweating. Temp. rose with the shivering to 101.4° . Slight pain in knee-joints.

24th.—No pain in knee-joints. Distinct pulsation in jugular veins. Systolic murmur heard very distinctly over tricuspid valve, as well as at apex. Has vomited this morning.

27th.—Vomited last night. Very restless. Bowels moved once during the night, twice this morning. No pain in knee-joints. Had no shivering nor perspiration. Appetite bad. Feels very weak.

28th.—Died at 6 a.m.

Post-mortem.—Right lung 2.5; left lung $1.1\frac{1}{2}$; heart 1.1; liver 4.14; kidneys 1.3; spleen 1.1; brain 3.1. Body well nourished. Skin very pale. Eyeballs prominent. Rigor mortis fully marked.

Head.—Membranes and brain natural.

Thyroid.—Lateral lobes slightly enlarged, otherwise natural. Right pleura contains about $2\frac{1}{2}$ oz. of pale serum. Left pleura natural.

Pericardium contains 15 oz. of pale serum, otherwise natural. Tissues in mediastina very œdematous.

Right lung somewhat congested and very œdematous. Bronchi congested, otherwise natural.

Left lung same as right.

Heart.—*Right side* dilated and slightly hypertrophied; contains a large quantity of partly decolorized clot; valves healthy. *Left side* somewhat dilated and hypertrophied; contains partly decolorised clot.

Mitral valves.—The posterior set of chordæ tendineæ are ruptured and the ends somewhat thickened, and are separated three quarters of an inch from one another, and are covered by dark-coloured clots; the rest of the valve is natural. (Sent to museum.)

Peritoneum natural.

Liver large; natural.

Spleen contains an old infarct near its lower border; substance congested and friable.

Kidneys large, swollen, and pale. (Good specimen of large white.)

CASE 2.—*Jaundice with obstruction.*

John B—, æt. 59, railway-guard; admitted 10th May, 1880; discharged June 30th, 1880.

Family history.—Father died from hernia. Mother healthy. No history of gout or rheumatism.

Previous history.—Railway-guard thirty years. Work-hours range from twelve to twenty. Had drunk a good deal up to seven years ago. Temperate for last four years. In January, 1879, had a long chilling journey, being at work twenty hours; a day or two after was laid up with cold, which kept him indoors for a fortnight.

Present illness.—Eight months ago was unwell for several days, then one evening shortly afterwards was seized with abdominal pain; on the following day pain more severe, for which he took pills, as ordered by a doctor. Next morning began to get yellow, and by the evening was of a deep tint. Has been jaundiced ever since. Was very sick whilst the pain was upon him, and as soon as he noticed his jaundice he found his motions of a pale colour. After the attack was over the motions became natural again. Has since had repeated similar attacks, at first about once a fortnight, but latterly more often. During each attack there has been an increase of jaundice, which has lessened again, but never entirely disappeared.

Weight before illness 12 st. 13 lbs.; after six months' illness 10 st.; now 9 st. 7 lbs. (about). Since first attack he has been unable to take solid food, without vomiting. Vomit consists of mucus only.

Present condition.—Rather thin; skin and conjunctivæ yellow; skin warm and moist. Itching all over the body. No œdema of face or legs.

Respiratory system.—No cough; no expectoration. Chest well formed. Good expansion. No abnormal physical signs.

Circulatory system.—Pulse 70, strong, not easily compressible. Heart normal; apex one inch and a half below nipple.

Digestive system.—Tongue coated with white fur. Appetite impaired. Bowels confined; motions sometimes pale, sometimes dark coloured, the change taking place suddenly.

Liver.—Dulness from upper border of the fifth rib in the nipple line; liver can be felt in the abdomen one inch and a half below the ribs; vertical extent of dulness six and a half inches. There is at present no pain or tenderness in this region. Spleen not enlarged. No ascites.

Urine.—Sp. gr. 1015; no albumen, no sugar. Bile pigment and bile acids both distinctly present.

May 13th.—Colour less marked. Urine 1014; bile acid and pigment; no albumen.

17th.—Had a little pain yesterday afternoon in the region of the liver, lasting half an hour; a few hours after he noticed the jaundice more intense, and his urine of a darker colour. Motion about the same in colour (light brown). No gall-stone found. Urine 1016, dark colour.

19th.—Motion rather lighter in colour after an attack of pain and sickness yesterday; he vomited his dinner. Jaundice deeper.

20th.—Jaundice less. Play of colours in the urine on the application of HNO_3 ; very marked reaction of bile acids present.

26th.—Complained of little pain in the epigastrium this morning; it has nearly gone now. He did not shiver. Temp. 99.2° — 101.4° .

27th.—A little more jaundice. Skin not so irritable. No pain; no sickness. Motions still light coloured. Urine 1013; much less pigment. Small amount of mucus.

June 4th.—Jaundice better; skin not irritable. Has passed over the

usual period of an attack of sickness and pain, without any such coming on. Sleeps better. Bowels open daily; motions rather dark.

7th.—Slight pain yesterday afternoon in the liver. No rigor; no vomiting. Rise of temp. to 100·6°. Motions pale after pain; urine also higher coloured.

16th.—Yesterday passed a pale stool. Ate some meat for the first time. No pain nor sickness. No rise in temp. From this time he improved steadily, and had no more pyrexia.

Weight.—May 10th, 8 st. 7½ lbs.; May 17th, 8 st. 9½ lbs.

Temperature record.

May 10th.—1 p.m.	98·5°	May 25th.—a.m.	97·6°
„ —6 p.m.	98·8	„ —p.m.	97·4
11th.—9.30 a.m.	97·7	26th.—a.m.	98·2
„ —6.45 p.m.	98·2	„ —11.25 99·2	
12th.—8.30 a.m.	97·9	„ —3.35 p.m.	101·4
„ —6.30 p.m.	98·0	(Vomiting; perspiration; no chill.)	
13th.—8.30 a.m.	97·7	26th.—8 98·2	
„ —2.30 p.m.	98·0	27th.—a.m.	97·7
„ —6 p.m.	98·4	„ —p.m.	98·0
14th.—8.30 a.m.	97·6	28th.—a.m.	97·0
„ —8 p.m.	97·0	„ —p.m.	97·8
15th.—8.30 a.m.	97·2	29th.—a.m.	97·4
„ —6.20 p.m.	98·2	„ —p.m.	97·4
16th.—a.m.	97·4	30th.—a.m.	97·4
„ —p.m.	98·6	„ —p.m.	98·2
17th.—a.m.	97·4	31st.—p.m.	98·0
„ —p.m.	98·2	June 1st.—a.m.	97·5
18th.—a.m.	98·7	„ —p.m.	97·7
„ —6.5 p.m.	101·4	2nd.—a.m.	97·4
(Rigor; vomited.)		3rd.—a.m.	97·4
„ —9.45 p.m.	100·0	„ —p.m.	98·0
19th.—8.30 a.m.	98·5	4th.—a.m.	97·8
„ —5.20 p.m.	99·0	„ —p.m.	97·6
20th.—8.20 a.m.	98·3	5th.—a.m.	97·9
„ —2.20 p.m.	98·8	„ —p.m.	98·5
„ —5.55 p.m.	98·2	6th.—a.m.	97·8
21st.—a.m.	97·9	„ —3.10 p.m.	100·6
„ —p.m.	98·4	(Pain; no vomiting; no rigor.)	
22nd.—a.m.	97·6	6th.—8 p.m.	98·5
„ —p.m.	98·6	7th.—a.m.	97·5
23rd.—a.m.	96·8	„ —p.m.	98·3
„ —p.m.	98·3	9th.—a.m.	97·5
24th.—a.m.	97·6	„ —p.m.	98·2
„ —p.m.	98·4	10th.—a.m.	97·4

June 10th.—p.m.....	97·6°	June 18th.—p.m.....	98·2°
11th.—a.m.....	97·0	19th.—a.m.....	97·7
„ —p.m.....	97·8	„ —p.m.....	97·9
12th.—a.m.....	97·3	20th.—a.m.....	97·4
„ —p.m.....	98·2	„ —p.m.....	98·4
13th.—a.m.....	97·7	21st.—a.m.....	97·9
„ —p.m.....	98·2	„ —p.m.....	98·6
14th.—a.m.....	97·4	22nd.—a.m.....	97·0
„ —p.m.....	97·9	23rd.—p.m.....	98·0
15th.—a.m.....	98·0	24th.—p.m.....	97·9
„ —p.m.....	98·4	25th.—a.m.....	97·2
16th.—a.m.....	97·8	„ —p.m.....	98·0
„ —p.m.....	98·4	26th.—a.m.....	98·4
17th.—a.m.....	98·1	„ —p.m.....	98·0
„ —p.m.....	98·4	27th.—p.m.....	97·6
18th.—a.m.....	98·2	28th.—p.m.....	97·8

Treatment.—Bed Ticket.

May 10th.—Fellis Bovini gr. v; Ext. Aloes Barb. gr. iv; in pil. ij.
h. s. s.

Ol. Ricini ʒss. Cras, si opus sit.

„ 13th.—Pil. o. n.

„ Sodæ Sulph. ʒj; Sodæ Bicarb. gr. x; ex Aq. ʒij; b. d. s.

June 28th.—M. Stomach., ʒj t. d., to take out with him.

Diet.—Milk. Beef Tea. June 3rd.—Mixed. June 24th.—Fish.

JOTTINGS FROM THE SURGICAL OUT-PATIENT ROOM.

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THE following cases occurring amongst the out-patients I have thought worthy of record in the 'Hospital Reports:'

Fracture of clavicle by muscular action.

Large vascular growth in the neck.

Nævi of the face treated by electrolysis.

Congenital hydrocele of the neck.

Multiple lipomata.

Fracture of clavicle by muscular action.

Fractures of the long bones by muscular action are sufficiently rare to be worth recording, and more especially is this the case, when such an accident occurs in a bone that is not ordinarily exposed to great muscular strain or the weight of the body. Hamilton records six cases of fracture of the clavicle by muscular action, and one only of these did he himself see; and Gurlt also has collected twenty cases, but it is quite evident that he has availed himself of Hamilton's list, for he quotes the same cases, so that probably there are not more than twenty which are well authenticated up to 1864.

The case that came under my observation was a married woman, E. M—, æt. 38, who presented herself in my out-patient room complaining of a swelling on her right collar-bone. She stated that six months previously she was quite well and working hard, but one day she was employed beating carpets, and in throwing a heavy Brussels carpet over a “line” suddenly felt an acute pain in the right shoulder. She found she could no longer raise her arm to continue her work and went home. On examination she discovered the swelling in its present position and about the same size. The skin in a few days became quite “black,” and remained discoloured for a fortnight. She also kept her bed for some days, but had no doctor. The pain, which lasted for fully a month, prevented her from using her arm. On examining the right clavicle it was quite evident that there had been a fracture; the fragments were in the usual position, and united by a considerable quantity of new bone. The axes of the two halves did not correspond to the known curves of the clavicle. There was so much displacement, as to give the impression that there was a third fragment between the two at right angles to both, but this, I have no doubt, was merely uniting callus. The fracture was firmly consolidated, neither pain, mobility, nor crepitus being present. As far as one could ascertain she had no predisposition to spontaneous fracture, never having previously sustained such an injury. Her confinements, too, had always been natural.

It is stated in one of our most honoured books on surgery that “it is a generally received opinion, however, that no long bone can be broken in its shaft by the mere contraction of its muscle, unless impaired by some morbid change in its structure.” In studying the twenty cases¹ before alluded to, which are for the most part fully reported in Gurlt’s ‘Hand-book of Fractures,’ it seems to me rather an assumption to believe that in all these cases there was some vague disease or predisposition to fracture, of which no previous or subsequent history existed to support such a conclusion. They are mostly men of middle age (between thirty-five and fifty, who were at the time of the accident making some

¹ Gurlt, ‘Handbuch der lehre von den Knochenbrüchen,’ Thl. I, s. 232, No. 10; s. 245, Nos. 96—107; Thl. II, s. 593, Nos. 28—34.

sudden and violent effort, which threw a considerable strain upon the clavicle, such, for instance, as "lifting a heavy basket to place it on his head," "lifting stones," "a carter giving his horse a backhanded blow with his whip," "a labourer throwing building stones from below upwards," "another throwing a heavy shovelful of rubbish on to his cart," "a Mulatto trying to beat his dog with a heavy whip," "a powerful railway labourer throwing with force a heavy shovelful of earth on to his truck." Fourteen out of the twenty were *men*; of the other six, five were women and one a child. There were also two whose sex is not mentioned. Nine out of the twenty cases were fractures of the *right* clavicle, three of the *left*, and in the remaining eight it is not stated on which side the fracture occurred. Out of the twenty only three are related to have had any constitutional disease. The Mulatto died of phthisis three years afterwards. A woman, not quoted above, aged sixty-eight, had a "periosteal abscess" in the site of fracture, and was possibly the subject of syphilis; and the third case was a sergeant of forty years of age, ill in bed with slight inflammation of the ankle-joint, who suddenly moved the left arm backward in drawing up the bedclothes, and felt a sudden pain in the left clavicle. This subsequently proved to be fractured, and became very much swollen. He had suffered previously from scorbutus, and was at the time very weak from long service. He subsequently developed a false joint at the seat of the fracture. There is no mention in any of the other cases of any constitutional disease, nor is it stated that the patients suffered from any other fracture.

In the case here reported two years have elapsed since she met with her accident, and there have been no other symptoms to indicate any general or special disease which would predispose to such an occurrence. I cannot help thinking that the complicated action of muscles, called into play by the movements described above, combined with the suddenness of the efforts necessarily made to accomplish such an action, as throwing the end of a heavy carpet over a "line," is quite sufficient to account for the occurrence of such an accident as the fracture of some part of the lever.

Large vascular growth in the neck.

The accompanying woodcut, taken from the photograph of a baby eight months old, represents an enormous vascular growth apparently springing from the parts beneath the lower jaw.



Martha B— was seven months old when brought by her mother to the out-patient room. She was stated to have been born with a considerable swelling in the submaxillary region on the right side. This swelling remained stationary for the first few months of infant life, and then suddenly in one month grew with such rapidity as to be more than double its original size. For some few weeks before coming to the hospital it had remained in much the same condition. It was an exceedingly large irregular growth, spongy and elastic on palpation, and capable of considerable reduction by pressure with the fingers; there was, however, no pulsation. The skin stretched over the growth was thin, and had in many parts a blue tinge from the close proximity of large vessels which could be emptied by pressure. The skin was, however, in no part invaded by nævoid tissue. The mouth was kept widely open by the enormous size of the tongue, which was apparently gorged with blood. Large tortuous vessels could be seen on the under surface beneath the mucous

membrane. The tongue was not uniformly enlarged, but presented a median narrow strip of almost normal-looking tissue, whilst the two sides occupying each nearly half the tongue, were swollen in the manner described above. The vessels evidently sprang from the deeper parts, and occupied principally the floor of the mouth pushing the tongue forwards. The front of the neck was also apparently involved, for one could not feel the thyroid and cricoid cartilage, and with difficulty could make out the trachea, just above the sternum. Laterally it overlapped the sterno-mastoids, more, as is seen in the woodcut, on the right than on the left. The aspect of the child was the most piteous that could well be seen. Her mouth was kept permanently open; the tongue protruding between the gums had, in its anterior part, become quite dry and hard from exposure to the air. The facial muscles had produced, for so young an infant, the most unnatural wrinkles, which seemed never to be obliterated, and could hardly be exaggerated in the occasional whine which represented what might be called an attempt at crying. The whole produced the most painful impression of conscious suffering that I have ever had the misfortune to see in one so young.

For some months the child had been unable to take her mother's breast, and was fed entirely with a teaspoon. The breathing was, towards the latter part of the time in which she was under observation, considerably impaired. She was brought to the hospital for about six weeks, and then died at home. The mother persistently refused admission into the hospital, which was constantly urged upon her, as much in the interests of the child as for the sake of a post-mortem examination.

Nævi of the face treated by electrolysis.

A nævus on the face is always of great interest to the surgeon, for he has here to exert his ingenuity to destroy the growths, and at the same time to produce as small a scar as possible. Oftentimes mere "specks" at birth, they afterwards in a few weeks grow with great rapidity, and if not quickly destroyed or removed become a source of great dis-

figurement. Besides numerous instances of such growths on the less important parts of the face, such as the cheeks and forehead, where the nævus can be treated with some facility, a few cases have appeared in the out-patient room of more than ordinary interest. Such were the following :

L. P—, a female, æt. three months. A small red spot was first noticed on the extreme tip of the nose when three weeks old. This steadily increased till the nose projected like a mushroom, the tip being about the size of an adult thumb as the child cried. The whole thickness of the nose at this spot was occupied by a nævoid growth. Tying was here out of the question. The actual cautery would have done too much, destroying as it does *en masse*. There was the same objection to caustics. Excision was also impracticable, as one could not take it away without removing the whole of the extremity of the nose. Electrolysis appeared more feasible, as centres of slough might be produced by its means through the whole thickness, and from thence coagulation and contraction spread throughout the growth. This was accordingly done, from six to eight cells only being employed, so as to avoid an extensive slough. It was soon apparent that some contraction was taking place, and that it did not swell quite so prominently when the child cried as it did before. As soon as the small puncture had quite healed and the scab fallen off the process was repeated, and in three months enough had been done to make it evident that coagulation and contraction were taking place throughout the whole growth. The child was then six months old. Left alone for three months it continued to contract, till at last there was no visible swelling at all when the child cried, and the extremity of the nose felt quite hard. This treatment had proved, then, quite successful in a case in which one could not remove the whole growth. An exactly similar nævus occupying the extremity of the nose is under my care at the present time, and the same treatment is being successfully followed.

M. B—, æt. 6 weeks. The mother had noticed a small red speck on right upper eyelid at birth, which had been rapidly increasing during the last few weeks. Nearly the whole of

the right upper eyelid, both in its thickness and in its breadth, was occupied by a rapidly growing nævus. All other treatment except that of partial destruction seemed unsuitable. Total destruction would have infallibly produced ectropion of an aggravated character, as the growth, besides affecting the skin, was evidently growing luxuriantly between the skin and tarsal cartilage, and from thence backward under the frontal bone. Electrolysis was here quite successful. A few cells only (from six to ten) were used so as to avoid an external slough. The needles made to penetrate the whole thickness of the growth left behind a tunnel of destroyed tissue, from which coagulation and consolidation spread through the whole nævus. The battery had to be applied several times to small spots, which continued for some time to spring up at the margin of the growth; and in two months it seemed quite cured. However, some time after, when the baby was about six months old, it was brought back again with the eyelid almost as full, and swelling as before when the child cried. This was very disappointing, but a second application in the same way again procured its consolidation.

Edw. J. H—, æt. 6 months, was brought to the hospital with a prominent nævus at the root of the nose, completely filling up the interval between the eyes. The skin and subcutaneous tissue were both involved by the nævus, which formed a considerable tumour when the child cried. By electrolysis, using only ten cells, consolidation was effected. It became almost entirely solid after a few applications, the perforation made by the needle healing with a depressed cicatrix. Sufficient discharge only was produced to keep a small scab adherent to the surface till the small circular cicatrix had been perfected. In a few weeks the tumour had shrunk considerably, although some of the peripheral part was still spongy. The mother ceased bringing her baby to the hospital as she considered it cured. In six months it was evidently beginning again to increase, so she brought him back, and we resumed the treatment by electrolysis to the outlying parts of the growth. It soon began to shrink and was, I believe, eventually completely cured, shrinking up into a small puckered mass at the root of the nose. I have not seen the child since, but I have no

doubt even this small amount of swelling has become much reduced in size. The charming part of this treatment by electrolysis is, that you can regulate the amount and extent of destruction by including a few more cells within the circuit or by reducing the number. And at the same time the action is not confined to the superficial part of the growth, but may be made to extend through the whole depth by pushing the needles or electrodes farther into its substance. Large deep-seated nævi on the extremities or trunk may be made to slough out *en masse* by a current from thirty to forty cells; and, with the same instrument, by merely reducing the number of cells a modified action, extending through the whole nævus, may be effected, as in the cases quoted above. That there is a tendency to recurrence after such partial treatment as is here discussed there can be no doubt. But then one must here recollect that it is only recommended for such cases as these on the face, in which total destruction for various reasons is quite inadmissible. I think, too, that by keeping the case always under observation the slightest recurrence can be at once checked in its growth.

Congenital hydrocele of the neck.

A. D—, æt. 2, was in the condition represented in the accompanying woodcut, which was obtained from a photograph on August 14th, 1877. The tumour was noticed at



the child's birth, and had gradually increased in size from that time to the present. On examination it proved to be

apparently a simple cyst. There were no irregularities of outline or inequalities of consistence on palpation. A wave was easily transmitted from end to end of what seemed to be an unilocular cyst. There was nothing to indicate the existence of any solid matter. The situation was peculiar, and more on that account than on any other have I been induced to publish it. It was situated entirely in front of the sterno-mastoid, between the latter and the lower jaw. Although the cyst overlapped this muscle and, in fact, rested upon the clavicle, by turning the child's head towards the opposite shoulder and carefully raising the tumour one could feel the sterno-mastoid throughout its entire length distinctly behind the cyst, while the deep parts of the tumour seemed to have connection with the tissues between the jaw and the sterno-mastoid. Such congenital cysts are almost invariably seated in the neighbourhood of the clavicle, producing large bulging swellings simultaneously in the axilla and the neck. The cervical portion of the growth is then generally to be felt in the posterior triangle behind the sterno-mastoid. But in this case there was nothing whatever to be felt in the posterior triangle or in the axilla.

On August 21st the cyst was tapped with trocar and canula. Six ounces of bloody fluid of the colour of port-wine were evacuated, but the sac was not entirely emptied. Some solid matter could then be felt between the angle of the jaw and the sterno-mastoid, but no other cyst. Six drachms of Tinctura Iodi and water in equal parts were then injected. In two hours the swelling had increased to half its original size, but it subsequently began to diminish, the skin hanging in folds where before it had been tense. This shrinking continued till September 3rd, when the sac began to fill rather rapidly. There were, however, no signs of inflammation.

On September 4th it was again tapped and injected with four drachms of Tinctura Iodi and water as before, four ounces of bloody fluid having been first withdrawn. This completely emptied the sac, and one could then feel more distinctly a solid mass in front of the sterno-mastoid, as previously indicated. The same evening the swelling had almost regained its original size, but from this time the dimi-

nution was continuous and uninterrupted till, in November, all that could be felt was a solid lump, about as big as a walnut, beneath the angle of the jaw.

Multiple fatty tumours.

In last year's 'Hospital Reports' I related two cases in which the forearms were covered with multiple fatty tumours symmetrically disposed. Since then another patient has presented himself with his body covered in a similar manner. During the present year, 1880, there have also been several cases recorded in the 'Brit. Med. Journal,' by three different observers. In each of these cases the tumours were remarkable for their symmetrical arrangement, and in occupying the limbs rather than the trunk. The forearm and thighs were the parts affected, and, separately examined, the growths presented the ordinary characters of fatty tumours.

In the cases reported by me last year the tumours were of small size and symmetrically placed upon the forearms. They had been suddenly observed, and did not subsequently increase in size or number. The present case is a still more extraordinary one than either of the preceding.

Wm. S—, æt. 44, waiter, had noticed lumps behind his head for about five weeks before he came to the out-patient room of St. Thomas's Hospital. He thought that they had been increasing slightly since first noticed. He did not know that he had any others. On examination we found that he had the most remarkable development of fatty tumours, all placed with the most accurate regard for symmetry on both sides of the median line of the body. At the back of his head, occupying nearly the whole of the occipital region, were two large fatty tumours, one on each side of the ligamentum nuchæ, stretching upwards on to the scalp as far as the superior curved lines of the occipital bone, and forward as far as the attachment of the sterno-mastoid muscle to the mastoid process. Equal in size, symmetrical in position, similar in all their characters to one another they presented a most quaint appearance. A little lower down but quite separate from the above were two others, one on each side of the spinous process

of the seventh cervical vertebra. These were quite distinct from one another, and placed in identically the same position on each side of the spine. These four tumours together formed a splendid likeness of the corpora quadrigemina, with a median and transverse groove separating them from one another. Beneath the jaw on each side were other similar growths, forming an almost complete collar of fat round the neck, but each development of fat was distinctly a growth which could be separated from the surrounding tissues, and presumably therefore provided with a distinct capsule.

Other fatty tumours were sprinkled all over the back, occupying pretty nearly the same positions on each side of the body, but not quite so symmetrical as the above; they varied in size from an orange to a small nut. In the lumbar region there was one large one on each side. On the abdomen he had also a very curious symmetrical arrangement of similar growths. Immediately below the umbilicus, on each side of the median line, were two rather prominent fatty tumours, soft, and rather more diffused than is ordinarily the case, but yet sufficiently isolated to make one feel sure that a capsule would be found if the growth were removed. Above the umbilicus were two other growths, similarly situated, but not quite so distinctly separable from the surrounding tissues as the others, forming, as it were, a transition between the ordinary constitutional development of fat and a fatty tumour. At each flexure of the elbow was a small lobulated growth, but, with this exception, there were none to be discovered on the extremities. The patient came under Mr. Croft's care in the hospital, and had both occipital tumours removed. They proved to be ordinary lipomata.

Multiple fatty tumours are, I am sure, not so uncommon as they are ordinarily supposed to be. I would submit that when they do occur they have a more or less symmetrical arrangement, not quite so accurately placed perhaps as in the case here recorded, but still equally occupying the two halves of the body. If the limbs are occupied by such growths, it will be the same portion of the body that is affected on the two sides, *e.g.* both forearms. If the trunk is the part involved, there will be an almost equal number on each half. I have observed similar cases in the practice of other surgeons,

and have come to the above conclusion. It is difficult to give any explanation for this symmetrical disposition, except that of constitutional diathesis. They generally appear at a time of life when fat is developed largely upon the surface of the body. A solitary fatty tumour looks like an accidental occurrence, but when the same growths appear in large numbers in the middle period of life, they seem to be a development of fat in a slightly aberrant form; the fat is encapsuled instead of being diffused over the surface of the body.

A CASE OF TRICÆLIAN HEART

WITH

INSUFFICIENCY OF THE VENTRICULAR SEPTUM.

By W. H. STONE, F.R.C.P., &c.

MARY H—, æt. 19, admitted into Christian Ward November 17th, 1880. Presented February 9th, 1881. Readmitted March 28th. Died March 31st.

The patient, a stout, muscular girl of dark and cyanotic appearance, stated that she had been of similar aspect since birth, and that she had suffered from dyspnœa after exertion. She was also subject to vertigo. Three years before admission she had an attack of rheumatic fever. This, as far as she knew, had not been accompanied by any heart complication, nor had any treatment been directed to that organ. She had not noticed any alteration in symptoms since the occurrence of the rheumatism.

On the 13th October, 1880, she attended as out-patient under the care of Dr. Sharkey, who at once substantiated the fact of congenital heart disease, although he was unable to state its exact nature. He recommended her for closer examination as in-patient.

On admission she made little complaint; slight cough and short breath, with pain in the left side, forming the principal symptoms. The appetite was good, the bowels regular. The catamenia, however, had always been irregular, scanty, absent for periods of six and thirteen weeks. The skin was healthy though livid; the temperature 97·6. The right jugular vein was seen to pulsate when she first came in, but this sign disappeared after a night's rest. The chest was well expanded, no pulmonary disease existing at any part.

The pulse was rather irregular, small, and thready, giving a very imperfect tracing with the sphygmograph; the curve approximating in character to that found in cases of ordinary mitral insufficiency.

There was a distinct systolic thrill over the cardiac region, most marked at a part halfway between the left mamma and the sternum, and conveyed upwards in a diagonal line from the midsternal point towards the outer extremity of the left clavicle. This was accompanied by a loud rough sound, also systolic in rhythm, most accentuated at the point covering anatomically the origin of the pulmonary artery. It was not loud at the apex of the heart; was almost lost to the right of the sternum, but was audible over the upper part of the scapula posteriorly, and less distinctly lower down. The heart was somewhat enlarged towards the left side.

The liver and spleen were not enlarged. There was no anasarca or albuminuria. I was able fully to concur in Dr. Sharkey's view that the disease was congenital, not due to the rheumatism. On the question of the actual abnormality, while admitting the difficulty of diagnosis, I ventured on a few purely physical and hydrostatic comments. In the first place, the thrill and murmur were strong, evidencing considerable mechanical force. Secondly, they were fluid sounds, produced by a powerful eddy or current sufficient to put the inert mass of the sternal parietes into sensible vibration. Thirdly, they occupied exactly the situation of the pulmonary artery. I did not think that an opening in the foramen ovale could cause so powerful a tremor, for lack of strength in the cavities on either side of it. Therefore it must be between ventricles or arteries.

To the latter opinion I somewhat erroneously inclined,

chiefly from the high position of the point of greatest intensity, but also because a pervious ductus arteriosus seemed to me to give the nearest mechanical conditions needed for producing the actual phenomena. Another physical point noted was the similarity of the sphygmographic tracing to that of mitral disease. The leakage was evidently taking place during systole, while the arterial orifices were patulous, exactly as in regurgitation through the mitral valve. It now occurs to me that if the communication were above the sigmoid valves the murmur should be double and not strictly systolic as this was. It will be worth watching for this in future cases.

The case offered little to note on its first appearance beyond the attempt at physical diagnosis above given. The patient went out after between two and three months stay in the hospital, somewhat relieved, but in all organic respects unchanged. In about six weeks she returned, and walked into the ward during my visit. I am therefore able to state that she presented no cerebral or other serious symptoms, and was accommodated with a bed in the usual way. She complained chiefly of severe headache. She died in two days.

Post-mortem examination.—*Heart* not excessively enlarged, the vessels springing from it quite normal. Ductus arteriosus not pervious. Water injected into the left ventricle through the aorta came out freely through the pulmonary artery. On inserting the finger through the pulmonary valves it met with an obstruction about an inch and a half beyond them. The auricles were normal as regards capacity and thickness of walls. They communicated by a slit-like fissure at the anterior edge of the septum, such as is not uncommon without producing any pathological effect. The walls of the right ventricle were hypertrophied to exactly an equal thickness with those of the left. The cavity of the ventricle was divided into two chambers, one much smaller than the other, and almost completely shut off from it by a firm fleshy partition. These two were in communication through a small circular aperture with cartilaginous margins, studded with vegetations the size of millet-seeds, and about a quarter of an inch in diameter. The small oval chamber was an inch and a half long, situated between the general ventricular cavity and the pulmonary valves. These were quite healthy. The septum between the

ventricles was perforated by a large semilunar orifice in its upper and "undefended space."

Brain.—On removing the dura mater the surface was found to be excessively congested on both sides. Purulent inflammatory deposit extended over the inter-pyramidal spaces and the pons. On the lateral surface of the right occipital lobe in its lower part was a soft, dark, circular, sloughy patch, about three quarters of an inch in diameter, which proved to be an old, thick-walled abscess cavity containing fetid brown pus, and which had burst into the posterior horn of the right lateral ventricle. This cavity contained a quantity of similar fetid pus. The parietal vessels were injected, and the inflammation appeared to have extended into the underlying substance, though the whole change was obviously secondary to the bursting of the abscess into it. There was much softening of the brain substance round the abscess, but no clot in the right posterior cerebral artery.

ON THE USE
OF THE
CONTINUED CURRENT IN DIABETES.

BY WILLIAM H. STONE, F.R.C.P.,

AND

WALTER J. KILNER, M.B.,

THE suggestion of employing electricity in the form of a constant current in cases of diabetes appears to date from the year 1861; on September 2nd of which year Mons. Mariano Semmola read a paper before the French Académie des Sciences, recorded in the 'Comptes Rendus' of that date. He states his views as to the causation of the disease at considerable length in twenty-one propositions, referring to a previous paper brought before the same Society six years earlier. Generally he attributes its occurrence either to exaggerated glyco-genic action of the liver, or to default of respiratory oxidation. The distinction between these two forms, he thinks, can be made out by the permanence or the transient nature of the phenomenon, and by the large or small quantity of sugar excreted. Where glycosuria accompanies disease of the nervous system the series of symptoms is of a double nature. The first follows convulsive affections, such as epilepsy and hysteria, it is usually of short duration and evanescent; the second,

which accompanies organic cerebral disease, must be looked on as a glycogenic stimulation of the fourth ventricle, and persists as long as the brain disease itself, developing in direct ratio to the proximity of the brain-lesion to the roots of the pneumogastric nerve. A more or less definite congestion of the floor of the fourth ventricle he considers to be the pathological condition constantly observed in diabetic patients. The action of electricity seems to point to the disease having begun in an essential neurosis, which would offer a reasonable chance of cure. This view is strengthened by the fact that when diabetic patients are not carried off by tuberculosis, the cause of death is usually some nervous crisis, such as epilepsy or dyspnœa due to apoplexy of the Pons Varolii. In his fifteenth and following propositions M. Semmola states that stimulation of the pneumogastric nerve by a direct current of sufficient force constantly produces a diminution in the quantity of sugar eliminated, and sometimes in the bulk of the urine itself. These effects are passing and only last from five to ten hours. Occasionally, however, they are more durable, and may amount to organic cure. He gives a case of a girl, aged 17, who became diabetic and amaurotic at the same time from a fright, and who recovered under galvanism. Electricity he considers not only a valuable therapeutical agent in such cases, but also useful in diagnosis as a means of distinguishing between an idiopathic neurosis, and one symptomatic of cerebral lesion.

As auxiliaries to electrical treatment he recommends wet packing, large doses of cod-liver oil, and increasing doses of sulphate of strychnia, raised to $\cdot 03$ of a gramme, or very nearly half a grain, daily.

The merit of this somewhat forgotten memoir consists not only in the clearness of the issues it raises, but also in the important distinction between neurotic and organic glycosuria, which must have struck every independent observer. The clear establishment of such a difference also goes far to explain the very variable results of treatment in this most intractable disease, and the want of success which has attended the labours of conscientious observers. It may be worth while to put on record cases which, although one of them terminated fatally, present many points of physiological interest.

CASE 1.—James V—, æt. 52, instrument maker. Admitted into Arthur Ward September 20th, 1880.

He stated that for the last ten or twelve years he had suffered from bronchitis in the winter, but had never had hæmoptysis. The present illness, however, dated from two years ago, when he noticed frequent micturition, with increased quantity of urine, and very ravenous appetite. These symptoms were accompanied by much loss of flesh, thirst, and coldness of the extremities. It was five months before he sought medical advice, and about eighteen months previous to admission he was taken into Guy's Hospital, where he remained for five months under the care of Dr. Wilks. He improved considerably during that period. From September, 1879, to May, 1880, he attended as out-patient of St. Thomas's Hospital, and since the latter date he had no regular advice, but continued taking opium pills, which he had "saved up" during previous treatment. He stated that the urine averaged five or six pints daily, but had risen to nine pints. It tasted sweet at times, and at others bitter; in the latter case being very dark in colour. The bowels had been loose formerly, but costive of late. He knew of no cause for the illness, and entirely denied any fright, mental shock, or anxiety.

On admission he proved to be an intelligent man, by trade a surgical instrument maker, a fact which was of service in the use of galvanism. The skin was dry and rough; the eye-sight dim, with occasional double vision. The pulse 68, rather weak. The heart sounds were normal. The chest showed the usual signs of emphysema, with effacement of the cardiac dulness. The liver was, for the same reason, somewhat pushed downwards, but not enlarged, tender, or altered in resistance; its margin could just be felt below the ribs. The tongue was clean. The bowels were relaxed to the extent of diarrhœa, with eleven evacuations in the twenty-four hours. The urine on the following day amounted to 73 oz., with a sp. gr. of 1040. The temperature was throughout slightly subnormal, 97°—98°.

On the 27th he had bilious vomiting and continued diarrhœa, the quantity of the urine being somewhat less in consequence. He was in the habit of taking crude opium in 2 gr. doses, twice or thrice daily, and at first expressed a strong craving for the drug. He was ordered Codeia gr. ij, ter die, which gave

him considerable relief and enabled him, of his own accord, to discontinue the opium. His chief complaint at this time was of failing eyesight.

On October 12th he was examined by Mr. Nettleship, who reported that the ophthalmoscope gave negative results, that there was no sign of cataract. There was well-marked central scotoma to colours, and that the case "resembled tobacco amblyopia, possibly accelerated by ill health, but not due to diabetes." During the first week of October the urine averaged 84 oz. daily, and contained, on quantitative examination, about 5 oz. of sugar. The treatment consisted solely of the codeia named above, which, on the 14th of October, was replaced by a lemonade made with acid. phosph. dil. ʒss. ad ʒij, sweetened with glycerine, and flavoured with lemons.

On the 18th of October this improvement noted at first was not maintained, and the codeia was resumed, but the quantity of urine rose to 102 oz., on the 20th to 139 oz., on the 23rd and 25th to 150 oz., with a specific gravity of 1040. The falling off in condition was so obvious that the lungs were again carefully examined with a view to detect signs of latent phthisis, which were not, however, found.

He remained very ill during the month, and on the 28th his weight sank to 8 st. 2½ lb. On the 31st the urine was 160 oz., and on the 3rd November it rose to the highest quantity recorded, viz. 170 oz., with an occasional sp. gr. of 1045.

On November 4th, seeing the threatening nature of the symptoms and the total ineffectuality of treatment, Dr. Stone suggested the use of the continued current to the head. After consultation with Dr. Kilner it was decided to employ an ascending current from the nape of the neck to the forehead; the negative pole being placed in the former region, the positive in the latter. The current was of 1500 micro-vebers in strength, and was at first continued for seven minutes. It gave him no uneasiness, and he thought himself temporarily better after it. It was from the first obvious that the action of electricity in a case of depraved nutrition, probably due to disorder of the organic nervous centre, should not be merely stimulant and occasional, but catalytic and constant. The patient himself was therefore entrusted with a powerful bichromate battery of thirty cells, made by Dr. Stone, and directed to use the

strongest current he could bear with comfort, as above described, twice or thrice a day. All kinds of mechanical contact-makers and commutators were discarded, and the battery, instead of being screwed up in a French-polished box, was ranged in three sets of ten cells on the ward table. A simple binding-screw was attached to the required cell. It was thus easy to see what was being done, and impossible to err as to the real direction of the current. On electrical measurement, Dr. Kilner found the strongest current he could bear, from nape to forehead, to be one of 10,000 micro-vebers. But a more moderate current of 1800 micro-vebers was begun with and increased to 2000 micro-vebers; it seemed to answer all purposes. The patient himself entered heartily into the treatment, and from the first declared himself better. The earliest symptom to amend was the eyesight, and the pinched expression of the face, which soon disappeared, with rapid recovery of flesh, amounting to 4 lb. within a few weeks.

On December 6th the urine measured 80 oz. of sp. gr. 1040. The thirst was less. He did not require opium, though he still took the codeia thrice daily in 2 gr. doses. The note taken by the house-physician on that day says, "Patient uses 14 cells of the bichromate battery; is very much better." The improvement was maintained until December 23rd, when some digestive disturbance was relieved by a dose of jalap. On that day the quantity of water was 74 oz.

On the 27th the sp. gr. was found to be 1038, the quantity 68 oz. On fermentation the sp. gr. only sank to 1026, indicating a reduction of sugar excreted from 5 to about 2 oz. daily.

On January 7th the urine was quantitatively tested by Dr. Bernays in consequence of a severe relapse accompanied by febrile symptoms which had necessitated the omission of the electricity. It was of sp. gr. 1042, containing sugar 8.00 and urea 0.97 per cent., with a trace of albumen. It had sunk in quantity to under 50 oz. daily. The febrile access proved to be due to perinœal abscess, which was opened on the 12th.

On the 13th the quantity of urine rose again to 100 oz. Directly he could leave his bed he recommenced the use of the battery with the greatest vigour, from a conviction that it was

of service to him. He was now able to bear a current of 10,000 micro-vebers from twenty-two of the bichromate cells above mentioned. This was on Jan. 20th.

On the 22nd the quantity of urine was 58 oz. It continued at a comparatively reduced standard until February 9th, on which day a large carbuncular boil began to form at the back of the neck, where the negative pole of the battery had been applied. The use of galvanism was then finally discontinued. The patient became much worse, restless, semicomatose, with raw excoriated tongue, unable to take food or stimulants. The quantity of urine rose to 110 and 120 oz. The temperature remained at 98·6° Fahr. In this condition he remained until February 21st, when it sank to 96·2. On the following day he died.

The question of diet has in these notes been reserved to the end. It was never very strict, Dr. Stone having found that patients usually refuse, after a time, to submit to very severe regimen, and thus that opportunity for investigation is lost. It consisted of extra meat, green vegetables, eggs and butter, with a pint of bitter ale and three ounces of whisky, daily.

It may be noted that family history threw no light on the nature of the case. The father died, æt. 65, of phthisis; the mother, æt. 60, of what was termed "ulceration of the liver;" of two brothers, one was drowned at sea, the other was alive in good health. Three sisters died in infancy. No member of the family suffered from diabetes.

On post-mortem examination the large carbuncle was found to extend no deeper than the subcutaneous fascia. The liver, spleen, and all other thoracic and abdominal organs were normal. The brain weighed 3 lb. 6 oz. It was large, firm, decidedly vascular, but exhibiting no other naked-eye appearances.

The pons varolii and medulla oblongata, on examination by Dr. Dickinson, showed enlargement, by erosion, of the perivascular canals in the lower part of the medulla near its centre, in the olivary body, in the upper part of the medulla, close to the floor of the fourth ventricle, and in the anterior part of the pons between the roots of the crura cerebri. In the two latter positions, both of which were in or close to the median plane, minute collections of brown matter were to be seen, external to

the vessels, which consisted of blood-corpuscles apparently extruded during life.

CASE 2.—G. G—, æt. 31, labourer. Admitted May 17th, 1881, into Arthur Ward. There appeared to be nothing special in his family history or in his previous condition. He was in the army in 1869, when he had an attack of scarlet fever. He suffered from ague for three months when aged fourteen. No syphilis, no evidence of intemperance, though he had taken spirits freely since his illness.

He stated that the present symptoms commenced in March, 1881, between two and three months before applying at the hospital. The access was rather sudden, coming on, as he expressed it, "all at once." He first noticed thirst, emaciation, a large discharge of urine, which obliged him to keep a pail in his bedroom, and general gastric symptoms with vomiting. His appetite became ravenous, the bowels obstinately costive, the skin and mouth dry. He complained of flying pains in the abdomen, back, and legs, with great loss of strength. He had been subject to boils. No reason could be assigned for the attack. His work during the previous winter had consisted of washing bottles and tubs, necessitating some exposure to the weather and to steam; but he had not endured any privation, nor had he undergone any mental shock or anxiety.

For five weeks he had measured the daily amount of urine, which averaged over sixteen pints daily.

On admission his expression was anxious and his manner dull. He complained of pains in the abdomen and legs, of great hunger, thirst, and constant micturition. The skin was harsh and dry; the tongue dry, furred, and cracked. The bowels were costive. On the right arm were the scars of old boils. Sight dim. On examination the chest was found to be normal, the heart sounds regular and healthy.

The abdominal walls were tense, slightly tender on the left side. The hepatic dulness extended from the upper edge of the fifth rib to half an inch below the costal cartilages on the right side. Its lower edge could be felt, firm and somewhat tender. The splenic dulness was not enlarged.

The urine was of sp. gr. 1042, acid, containing sugar in abundance. Temperature 97·4°, at which point or rather less

(97·0°) it remained throughout. He was placed on a moderately regulated diet, and the state of the bowels attended to. As soon as he had become settled the quantity of urine was carefully measured. On the 21st he passed twenty-four pints, in which the quantity of sugar was found by careful analysis to be 38 gr. per oz. He was very weak, especially in the legs, giddy, parched in the throat, and unable to swallow. On the 22nd diarrhœa set in, which continued until the 24th, leaving him very prostrate. On the 25th this was checked, and the use of the continuous current from about ten bichromate batteries was commenced.

It was difficult at first from the low intelligence of the patient to obtain any satisfactory measurements. The current was passed from the nape of the neck, where the negative, to the forehead, where the positive pole was placed. Large carbon electrodes, covered with lint and soaked in solution of salt and water were employed. After some practice a current of 20 to 25 milliwebers was obtained through a very variable resistance which never sank below 2000 ohms.

On the 26th, after the third application of the battery, which he was instructed to use twice or thrice daily under the sister's supervision, he expressed himself as better, and stronger in his legs. In the twenty-four hours preceding he passed only 12 pints 14 oz. of water, of sp. gr. 1032, containing 32 gr. of sugar per oz. This would give 6592 gr. of sugar as against 14592 gr. passed five days previously.

The rest of the clinical history may be summed up in a table.

Date.	Quantity.	Grs. of sugar per oz.
May 27th . .	11 pints 15 oz. ...	—
„ 28th . .	14 „ ...	—
„ 29th . .	15 „ 12 „ ...	33 gr. per oz.
„ 30th . .	— ...	35 „ „
	Quantity stationary.	
June 3rd . .	11 pints 8 oz. ...	24 „ „

On June 6th the patient, who had always been of a morose and querulous temper, left to try some other hospital. The last analysis on June 3rd gives 184 oz. containing 4416 gr. of sugar.

After the recent valuable researches of Mr. Gore in electrical osmose and diffusion, the statement of M. Semmola, made twenty years ago, confirmed as it is by the above cases, deserves careful reconsideration. The chemical effects of the galvanic current, employed in its continuous form, undoubtedly require development, in opposition to the purely stimulant action on nerve and muscle of the induced current. The fact of a definite polarisation of the tissues included in a galvanic circuit, leading to a reverse current of a secondary character, has been shown both by Cyon, of St. Petersburg, and by Onimus, of Paris. It would almost seem, in this instance, as if an inhibitory alteration of osmose could be transmitted downwards from the governing centre, under the catalytic influence of the voltaic current, to the secreting organ at its peripheral extremity.

CONTRIBUTION
TO
PATHOLOGY OF DOUBLE OPTIC NEURITIS.

By WALTER EDMUNDS, M.D.

THE following case is recorded on account of its bearing on a question to which a good deal of attention has been given of late—namely, by what process intracranial disease causes the double optic neuritis which so frequently accompanies it?

Kate C—, æt. 8, was run over by a horse and cart, receiving injuries which proved fatal in twenty-four hours. At the post-mortem examination a large laceration of the liver with extravasation of blood and rupture of the right kidney was found; there was also a fracture in the middle fossa of the base of the skull; it did not pass into either orbit, nor into the immediate neighbourhood of the optic nerves. There was some meningitis at the base of the brain. On removing the optic nerves it was noticed that they were of a reddish colour and that there was some pyriform swelling of the nerve immediately behind the eye. The nerves were hardened in Müller's fluid and alcohol.

Transverse sections of the nerve were made at different levels, and longitudinal sections through the optic disc, and that part of the nerve immediately behind it. On examining the transverse sections microscopically there was seen in the outer sheath an increased number of staining nuclei of the

tissue, and inflammation of the small blood-vessels and capillaries of the part.

The space between the two sheaths, in which there are usually only a few trabecular fibres, was distended by inflammatory products, consisting of densely packed cells, with some fibres and blood-vessels among them (see Plate I). The thickness of this layer of inflammatory material was greater in the anterior part of the nerve than in that towards the back of the orbit. The inner sheath of the nerve showed less signs of inflammation. The nerve itself was slightly affected; there was inflammation of the blood-vessels passing along the trabeculæ, and this was more marked at the periphery than towards the centre of the nerve; the blood-vessels in the nerve were seen to be full of blood clot, in which there was an increase of white blood-corpuscles; there was, however, no appearance of migrated leucocytes in the neighbourhood of the vessels.

The longitudinal sections of the nerve through the papilla showed inflammation of the outer sheath, and in the space between the two sheaths; this space is seen to terminate anteriorly in the usual acute angle, which shows that there has been no considerable fluid pressure between the sheaths.

Inflammation of the lamina cribrosa and of the trabeculæ between the nerve bundles is well marked; the lamina cribrosa has its convexity looking forwards instead of (as is usual) backwards.

In the papilla there is some swelling, although the central pit is not obliterated; it is doubtful if this swelling is sufficient to have been recognized with any certainty with the ophthalmoscope during life. The swelling of the papilla is due to œdema both between and in the nerve bundles; inflamed capillaries are seen passing through the papilla. The central artery and vein are distended with blood clot, in which there is an excess of white corpuscles. In the retina, too, the large blood-vessels are similarly distended with blood.

The chief interest of this case arises from the short time (twenty-four hours) the child survived the injuries. We are thus able to observe the earliest stage of descending optic neuritis.

The simplest explanation of the appearances just described is that the inflammation spread from the inflamed meninges

to the tissue between the nerve sheaths. There is no distinct evidence of any fluid, nor is there any necessity to assume with Leber that the inflammation has been preceded by a serous effusion from the inflamed meninges having phlogogenic properties. From the sheaths the inflammation is spreading inwards into the nerve as is shown by its being more marked at the periphery than at the centre of the nerve.

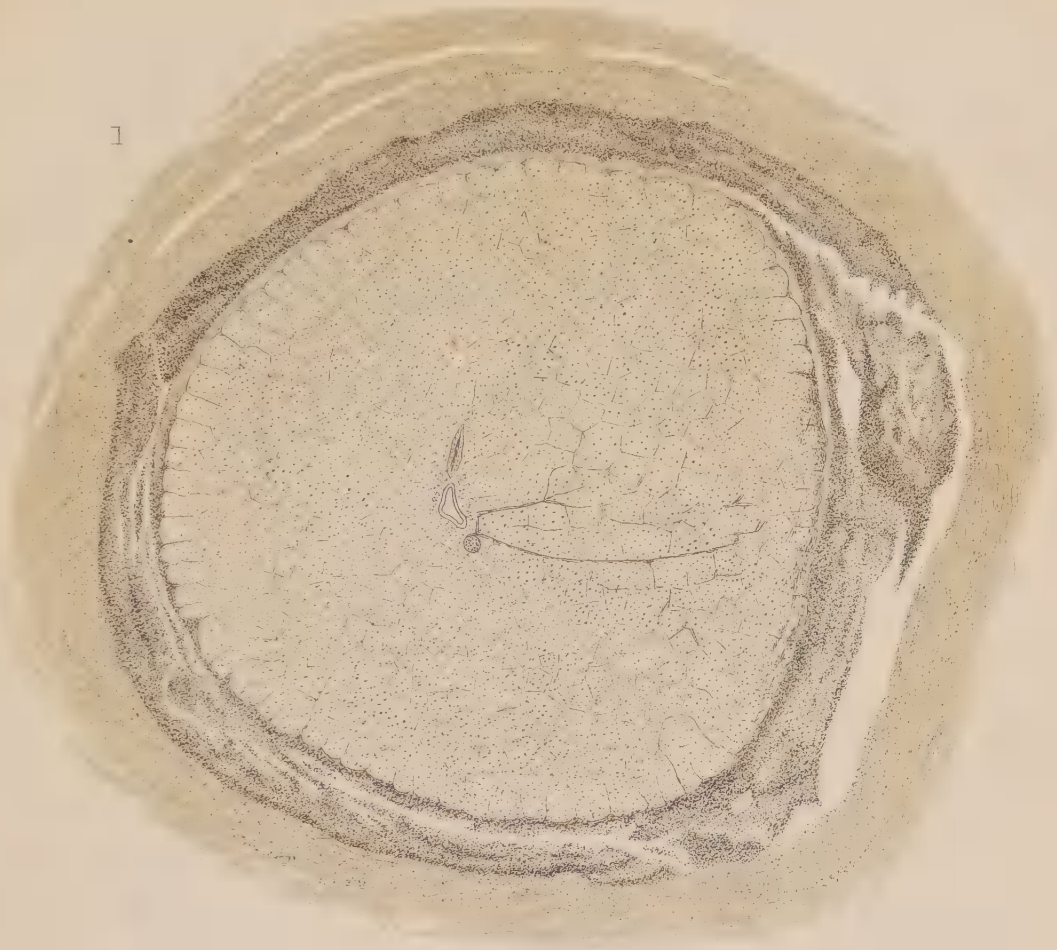
The cupping forwards of the lamina cribrosa shows that there has been an increase of pressure in the nerve; the swelling of the papilla is due to œdema between and in its nerve bundles, but that it is also the subject of inflammation is seen from the condition of its capillaries.

EXPLANATION OF PLATE.

The upper figure shows a transverse section of the optic nerve near the eye. It is magnified about 25 diameters. There is a dense zone of inflammatory material between the two sheaths. Some inflammation is seen in the trabeculæ between the nerve-bundles.

The lower figure shows a portion of the circumference of the same nerve more highly magnified.

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2



CASES OF ABDOMINAL SURGERY.

WITH REMARKS.

By BERNARD PITTS,
RESIDENT ASSISTANT SURGEON.

THE following cases present a few points of interest in relation to abdominal surgery. I have therefore ventured to record them briefly. They have been under my care in the hospital during the last year. I wish to express my indebtedness to the surgeons for their kindness in giving me the opportunity of treating them.

CASE 1.—*Intestinal obstruction ; abdominal section ; discovery of a stricture ; sigmoid flexure stitched to the margins of a separate incision in the left groin ; recovery.*

Sarah C—, æt. 42, admitted February 19th, 1881 ; married, one child. Had good health till twelve months ago. During last year she suffered from slight occasional pain in the epigastric region. For several months the bowels have been more or less constipated, *i. e.* open only every three or four days.

Three weeks before admission the bowels were opened by castor oil, and fourteen days ago an enema brought away a little fæcal matter. During this time the taking of solid food has always been followed by vomiting, and nothing has passed per anum for fourteen days. She has had frequent attacks of

severe griping pain in the epigastric region, and this pain was especially severe for two days previous to admission.

On admission, February 19th, no stricture of the rectum could be felt. There was considerable abdominal distension, the coils of bowel in the lower abdomen being especially prominent. Some dulness in the flanks, changing with position. Tongue dry; expression anxious. Constant sickness, unable to retain anything except small quantities of milk and soda water. Several enemata were given without effect. The tube was passed eighteen inches.

February 21st.—No improvement; patient is weaker. The stomach will not retain even fluids now. Mr. MacCormac, under whose care the patient was admitted, saw her in the morning, and advised an exploratory operation, but, being unable from indisposition to operate, asked me to take charge of the case. On the evening of the 21st I made a central abdominal incision under the spray, and introduced my hand into the abdomen. About one pint of coloured serous fluid escaped. The small intestines were distended, slightly injected, and granular in appearance. The descending colon and cæcum were distended. An annular stricture, hard and firm, was discovered at the junction of the sigmoid flexure with the rectum, completely closing the gut but not implicating the surrounding parts. A tube was passed into the rectum, and felt projecting against the stricture, which, by further pressure, was easily displaced upwards. An opening, one inch long, was now made in the left groin, at the outer third of Poupart's ligament, by incising the abdominal wall from without inwards upon the first finger of the left hand placed within the abdominal cavity. By keeping the left hand in the abdomen the intestines were prevented from escaping at the central wound. The sigmoid flexure was drawn towards the colotomy wound and secured there by silk sutures passed through the peritoneal and muscular coats of the bowel. The abdominal cavity was now cleansed, the central wound closed, and both wounds were dressed antiseptically. Morphia was administered subcutaneously, and nutrient enemata ordered.

About fourteen hours after the operation the dressing was cut away over the wound in the groin, and the cut margin of the central dressing carefully sealed by strapping dipped in

carbolic lotion. The larger central wound was thus completely protected. The bowel was then incised, gas and eight ounces of dark fluid evacuation immediately escaped. Fæces continued slowly to flow for the next six hours.

In the evening the patient seemed much relieved. Temperature normal. Able to take a little fluid *by the mouth* without vomiting. Nothing worthy of record occurred during this patient's convalescence. She made an uninterrupted recovery. By a little care with the dressings, and by changing the central dressings about every second day, and by carefully securing that margin of the dressing bordering the colotomy wound with strapping, I was enabled to keep the central incision antiseptic throughout.

She is now (six months after the operation) in good health, and able to do hard work. The colotomy wound is about the size of the little finger, without any prolapse. She passes a good deal of her fæces the natural way, but occasionally has some pain and passes a little blood from the rectum. Considerable relief is experienced by having the artificial opening occasionally dilated.

Remarks.—An abdominal exploration was performed in this case on account of the obscurity of the symptoms, and one was disposed to it by the fact that the enema tube could apparently be passed such a long distance and a considerable quantity of fluid injected. When the abdomen was opened, and while the hand was grasping the stricture, I took the opportunity of having the tube passed again, to ascertain how such a mistake could have arisen; and I found that when the end of the tube reached the stricture it displaced it with the sigmoid flexure upwards. The flexible tube then turned on itself, but at such a distance from the anus as to defy detection. An opening in the abdominal wall opposite to a part of the sigmoid flexure, well removed from the disease, was easily made by cutting down upon the finger. By waiting till the next day before opening the bowel, the abdominal cavity was completely and antiseptically shut off. In illustration of this point, I may mention a case in which I performed lumbar colotomy a few weeks since for malignant disease of the rectum. I did the operation antiseptically, and, as there were no urgent symptoms, I did not incise the bowel until two

days had elapsed after the operation, and in this way complete primary union of the wound was obtained. If the peritoneum had been wounded in the operation there would have been much less anxiety as to the result after taking these precautions. I believe the intestine should never be opened in the first instance, unless the delay of a few hours would be dangerous. But to return. There would not have been much difficulty in bringing the sigmoid flexure up to the central wound and attaching it there, as was done in the two cases reported in the Clinical Society's 'Transactions' of 1879; but I preferred to make an independent opening in the groin, since it is more in the natural course of the intestine, an altered position favouring after troubles; and one was enabled also to keep the larger wound dressed antiseptically, and after-prolapse must be much less likely to occur when the parietal wound is small.

The choice of operation in cases of intestinal obstruction, where the obstruction is not very acute and where there is no stricture to be felt in the rectum, and the previous history throws little light on the case, is often a very difficult question.

Colotomy is, in many such cases, an operation as it were at a venture; so much so, that the surgeon sometimes thinks it necessary to do right colotomy, so as to include the chance of the obstruction being higher up in the large intestine.

By making a central incision antiseptically large enough for the introduction of the hand, the presence or absence of stricture in the large intestine can easily be determined without any very great manipulation of the abdominal cavity. If a stricture be found a colotomy can be done with the greatest ease, and the operation, if undertaken before the patient is *in extremis*, can be done as in the above case with every antiseptic precaution. There need be practically no colotomy wound to heal.

I believe that it is most likely that the growth causing the stricture in this case was columnar epithelioma. A short time ago I was shown a sigmoid flexure taken from an old man who had died of acute obstruction supervening on chronic obstruction of two years' standing. There was an exactly similar annular constriction, which microscopical examination revealed to be columnar epithelioma.

The question suggests itself, whether one would be justified in attempting to remove the piece of bowel involved by making a fresh abdominal incision.

At the first operation, of course, the woman was too ill for any treatment beyond the immediate relief of symptoms.

May 26th, 1882.—I have seen this patient several times during the last year. She continues in good health, and suffers very little inconvenience from the preternatural opening. I have on several occasions had to dilate the opening to give her more complete relief to the obstruction by the stricture. I have tried in vain to persuade her to come into the hospital again for the purpose of removal of the diseased bowel. I fear that now the stricture may have acquired adhesion to surrounding structures. I am glad to see that Mr. Bryant has lately removed successfully such a stricture after colotomy, and that the operation that I hinted at when writing this paper a year ago is now a recognised one in surgery. Mr. Marshall has also recently published a case very similar to my own, but in which he removed the diseased bowel at the primary operation. I should imagine, however, that in most cases it would be preferable to relieve the condition of obstruction first, and to perform the colectomy at a subsequent date.

CASE 2.—Intestinal obstruction ; abdominal section ; a portion of intestine discovered free in the abdominal cavity, which had been strangulated in the left inguinal canal ; death.

C. H—, male, æt. 45 ; admitted April 9th, 1881, under the care of Dr. Bristowe, suffering from constant fæcal vomiting and distension of the abdomen. There was no appearance of any hernia, but the patient stated that he had been subject to a hernia on the left side for ten years. The rupture was of small size, and had been always reducible. He had never worn a truss, and had not suffered any inconvenience from it.

Three days before admission he was seized, whilst at work, with violent pain in the abdomen, followed a few hours afterwards by sickness. The hernia, he stated, was not then down. He was treated by a doctor, who gave him several doses of aperients, and administered enemata. The bowels did not act,

and the patient became rapidly worse, vomiting became more frequent, and for twenty-four hours previous to admission very offensive in character. Patient stated very positively that his hernial swelling came down whilst vomiting on the morning of admission, but went back almost directly, just as usual.

On admission he was constantly bringing up large quantities of stercoraceous vomit of pea-soup consistence. The abdomen was moderately distended, and was resonant all over. Some pain was complained of across the umbilical region, but no tenderness or fulness at any particular part could be detected. The left inguinal canal was carefully explored, and seemed a little more patent than the right. Temp. 97.8° . Tongue dry and brown; great thirst. Anxious expression. No hiccough. Urine rather scanty, but free from albumen. An enema brought away two small lumps of faecal matter. The passage of the long tube caused a good deal of pain at the upper part of the rectum. It could not be passed for more than nine inches. Dr. Bristowe saw the patient, and ordered him to be kept under the influence of morphia during the night. The next morning he was much worse—skin cold and clammy, and temperature greatly depressed, 96° in axilla. At Dr. Bristowe's request I made an antiseptic exploration in the middle line. There was no ascitic fluid. The intestines were slightly injected and distended. Following the distended bowel downwards (without allowing any protrusion), a knuckle of ileum was found lying in the central part of the abdominal cavity, which had evidently been constricted in the greater part of its circumference; it was dark in colour, with a well-defined line of constriction, and the intestine below this was completely collapsed. Inspection of the inner wall of the abdomen showed a white line of slough around the left internal abdominal ring, so that it was clearly evident that the knuckle of intestine had been strangulated there unknown to the patient, and had then become reduced. The piece of bowel looked perfectly recoverable; nothing further could be done. The abdomen was closed, and the wound dressed antiseptically. The line of treatment was now quite clear, and no more efforts made to open the bowels by enemata. Small nutrient enemata were, however, given and retained. His temperature two hours after operation became normal, he expressed himself free from

pain, he had less vomiting; but later in the evening he became very delirious, the urine was exceedingly scanty, and he died about twelve hours after the operation. The post-mortem examination revealed nothing beyond what was determined at the operation.

Remarks.—The man was closely questioned on his admission, but was positive that he had no pain or tenderness in the situation of his hernia. The symptoms were far in excess of what one should expect from the condition of the gut. The intestine was not disengaged at the time of the operation, for the constricted bowel was found far away from the inguinal region, and before any traction was made on the intestine. I have thought the case worth recording on account of the impossibility of making any diagnosis before exploration, and of the unusual severity and continuance of the symptoms, apparently due to paralysis of intestine after a comparatively mild strangulation. Possibly the repeated aperients that were given at the time the gut was strangulated and subsequently, might account for this otherwise puzzling fact.

CASE 3.—Strangulated inguinal hernia; reduction by taxis; continuance of the symptoms; exploration of abdominal cavity; discovery of gangrenous bowel; symptoms relieved; death from pneumonia and exhaustion ten days after operation.

Robert A—, æt. 45, admitted December 26th, 1880, at 8.30 p.m., with right inguinal hernia strangulated. He had had a hernia for fifteen years, had never worn a truss, and had frequently enjoyed intervals of freedom from protrusion, although his occupation was laborious. There was no history of previous trouble with the hernia, which had been always easily reducible. At 2 p.m. on the day of admission the hernia came down. He failed to reduce it. Before coming to the hospital he vomited twice.

On admission patient had a broken-down cachectic appearance. The hernia was the size of a duck's egg and incomplete; rather tense, without impulse, and with some pain at the neck of the sac. Expression normal; tongue clean. There was some swelling of the epididymis and cord to be felt

below the hernia. The bowels had been open in the morning. Gentle taxis was tried, and the swelling seemed to diminish in size. An icebag was applied. He took milk and ice through the night without being sick. An enema was given without result.

The next morning the swelling seemed much less tense, but he had been a little sick once; the vomit was composed of a little curdled milk. Taxis under an anæsthetic was tried, and, with very little manipulation, all the swelling disappeared, leaving the inguinal canal quite clear. The bowel slipped into the abdomen in the usual manner, but without a definite gurgle. In the evening the patient was quite comfortable; there was neither pain nor sickness, tongue clean, temperature 98.4°.

The next morning he was ordered a truss. At 12 a.m. on the same day, however, he vomited some clear watery fluid after sucking ice. In the evening there was some slight distension of the abdomen, with tenderness over the situation of the internal ring. The sickness had not recurred. *Pil. Opii*, gr. i, given, and icebag reapplied.

December 29th (7 a.m.).—Was slightly sick after iced water. An enema returned without result. Abdomen rather distended and tympanitic; tenderness and fulness of the inguinal canal. No direct evidence of any fresh protrusion. Tongue moist, but a little furred down centre. Temperature normal. In the evening some leeches were applied over the tender part.

30th.—Sick twice this morning, bringing up brownish sour fluid. Expression anxious. Abdomen more distended and tympanitic; tenderness less marked; legs not drawn up. As improvement was taking place, and there was evident obstruction, I decided to explore the canal; and, at 3 p.m., I cut down antiseptically. The sac was inflamed and thickened, and a little clear fluid escaped from it. A small tag of omentum was just visible at the internal ring. On making traction on this a large mass of omentum was drawn down, exhibiting at one point a small patch of lymph, as if it had been lying against some inflamed structure. To make room, I ligatured and removed the omentum, enlarged the ring, and introduced the finger into the abdominal cavity. Discovering

nothing, I then extended the incision outwards in the abdominal wall for about two and a half to three inches. The cæcum showed itself, was drawn down, and found to be normal, with the stump of the removed omentum attached to it. Another part of the large intestine was then drawn down, much changed, ashy grey in colour, and soft, for the extent of about two inches in length, and for the greater part of its circumference. The margin of the bowel around was dark and greatly congested. The cæcum was returned, and the part of the bowel which seemed damaged beyond recovery was attached by its congested margin to the edges of the lower part of the wound by a number of fine sutures passed through the peritoneal and muscular coats. The incision in the abdominal wall was then closed by deep silk sutures, and antiseptic dressings applied. In the evening the patient expressed himself as much more comfortable. Temp. $97\cdot4^{\circ}$; still sick. Subcutaneous injections of morphia (one third of a grain) were given every six hours.

31st.—Temp. $99\cdot8^{\circ}$. The dressings were removed, and the bowel, which was not quite black, incised. Nutrient enemata ordered every four hours. During the next three days the patient greatly improved, was able to take milk and stimulants by the mouth. The sickness ceased, and plenty of fæcal matter escaped from the artificial opening. The abdomen was much less distended, and the tenderness had disappeared.

From this time the man, though relieved of all abdominal symptoms, began to lose strength and flesh, notwithstanding the administration of brandy, eggs, and strong beef tea. He died on January 8th, ten days after the exploratory operation.

A post-mortem was made, and the portion of intestine opened was found to be the hepatic flexure of the colon. The adhesions of the edges of the bowel to the wound were firm, and the omental stump healthy. There was no trace of general peritonitis, and the rest of the intestines were quite healthy. The kidneys, heart, and liver were normal. Lungs: left upper lobe congested, lower more or less consolidated, mainly in patches in the central part. The right lung contained in the lower part some irregular patches of consolidation.

Remarks.—This patient was admitted into hospital very

shortly after the commencement of symptoms. He had suffered from hernia for many years. The strangulation did not appear at all of an acute character, and the hernia distinctly got less tense with the application of ice. Complete reduction was affected under ether with great ease, and no apprehension was felt as to the result. All symptoms appeared to have been relieved.

On the reappearance of sickness and some tenderness about the sac, I treated the case as inflammatory, but when the signs of obstruction became more decided, I determined to explore the sac, thinking from the fulness about it that possibly strangulation had recurred, or that the reduction had not been so complete as I had imagined.

Finding, on exploration, that the sac was really empty—in the face of the symptoms—I felt bound to proceed with an exploration of the abdomen in the neighbourhood of the hernia.

The relief given by having the piece of damaged bowel brought outside the abdominal cavity was very marked. By waiting a few hours before opening the bowel, the abdominal cavity was shut off, and peritonitis was avoided. The abdominal exploration had also all the advantages of being performed with antiseptic precautions. The absence of general peritonitis was remarkable, since the bowel had actually become gangrenous within the peritoneal cavity, and by the operation was just saved from perforation.

The case was a tempting one for the removal of the damaged intestine, but I feared to attempt it, thinking the man would best be immediately relieved by an artificial anus. A peculiar feature in this case was that bowel constricted so severely as to lose vitality should have so easily been reduced by taxis and without rupture.

CASE 4.—*Imperforate rectum ; Littré's operation ; death sixteen days after operation from surgical kidneys.*

J. W—, male, aged two days, admitted January 19th, 1881, for absence of anal orifice. Child fairly nourished, with slightly jaundiced complexion, and greatly distended abdomen. For twenty-four hours before admission the infant had been constantly sick. No impulse of bowel could be felt in the peri-

neum. Chloroform was administered, and a catheter passed into the bladder. A slight trace of meconium was observed coming with the urine. An incision was made in the perineum, and an attempt made to find the rectum without success. The bladder was subsequently carefully searched for any communication with the bowel. An incision was then made in the left groin. The small intestine first presented itself in the wound, but the sigmoid flexure was easily found, fastened to wound, and then opened. For the next five days all went well, there was free discharge from the artificial anus, first of meconium, and then of ordinary fæcal evacuation. The abdomen became natural, without evidence of peritonitis, and nourishment was taken well. Some prolapse of mucous membrane of the bowel then took place, and the child began to emaciate, nourishment was ill borne, and the urine became offensive and contained some purulent matter. Death occurred on February 16th, sixteen days after the operation.

A post-mortem examination was made. The sigmoid flexure was found firmly adherent to the wound in the groin. On injecting water into the bowel it was seen to issue by a fine stream from the penis. The wound in the perineum was still open, and led up to a mass of fat in the pelvic cavity. The rectum was found to be somewhat dilated towards its extremity, turning forwards anteriorly, and ending in the floor of the urethra, just anterior to the veru-montanum, by a communication the size of a crow-quill. The mucous membrane of the bowel being continuous with that of the urethra. The mucous membrane of the bladder was rather injected. The kidneys were large; the left contained numerous small, scattered abscesses, and in the right were also a few small points of suppuration. No trace of peritonitis was found, and the remaining viscera were healthy.

Remarks.—The cause of death was evidently surgical kidney, secondary to the irritation caused by the presence of fæces in the bladder, combined with the irritation produced by the exploration of the bladder in the attempt to find the communication with the rectum.

Beyond the slight discharge of some meconium which had collected in the bladder, the child for the first few days had apparently no urinary trouble, and the sequence in so young a

subject of kidney mischief I was not at all prepared to expect, and did not make any effort to cleanse the bladder.

CASE 5.—*Acute intussusception ; manipulation ; recovery.*

G. G—, male, æt. 4½, admitted April 24th, 1881, under Dr. Stone. Early on the morning of admission the child had a constant desire to pass a motion, and after some hours passed with much pain a semi-solid evacuation. The symptoms of abdominal uneasiness began at 6 a.m., the motion was passed at 11 a.m. By the mother's statement the child then became cold and seemed in agony. No blood or discharge was noticed with the motion. In the afternoon he was brought to the hospital. When seen by Dr. Acland, the house physician, the child's face was pinched and pale, the extremities cold, the legs flexed, the abdominal walls tense, and an elongated tender mass was felt in the left hypochondrium, extending through the left lumbar and iliac regions. Shortly afterwards vomiting occurred, associated with much rectal tenesmus, and the passage of blood and mucus. In the rectum, about one and a half inch from the anal aperture, a soft mass could be felt with a distinct central orifice, and on withdrawal of the finger a discharge of blood and mucus occurred. At 6 p.m., twelve hours after the first symptoms, I was requested by Dr. Gulliver to try inflation of the bowel with air. This was attempted under chloroform, but at first entirely failed. The child was then suspended by the heels and gentle manipulation (with one finger in the rectum, and the hand grasping the tumour in the iliac fossa) was tried. The swelling under the taxis receded, so as to be only perceptible at the splenic flexure, but could not be made to travel further by manipulation. Inflation with air was now again resorted to, and the swelling was visible travelling round to the cæcal region, and, on continuance of gentle inflation, the whole abdomen was soon uniformly distended with air, and all trace of localised swelling lost. The child slept for two hours after the chloroform, and was then given an enema of starch and opium. He made an uninterrupted recovery, passing, however (after taking solid food for the first time), a little blood with the motion on the fourteenth day. The child was in consequence kept a little

longer on fluids, but left the hospital quite well on May 12th.

Remarks.—The very completeness of the intussusception in this case rendered the application of taxis almost as definite as for the reduction of a hernia. Under chloroform the swelling could be picked up with the fingers, and the sudden slipping upwards of the invaginated portion, gave the sensation of the reduction of a hernia, but with an absence of gurgling.

Probably a few hours more delay in bringing the case to the hospital would have rendered reduction by manipulation impossible. And I certainly did not in this case expect that reduction would have so easily been effected.

When the child was straining before the administration of chloroform, the intussusception was almost presenting at the anus. Inflation alone had very little chance of success, as there was no room for the proper introduction of the tube into the rectum.

CASE 6.—*Unusually large femoral hernia with symptoms of strangulation; reduction by operation of six feet of intestine; radical cure; recovery.*

William P—, æt. 45, baker. Admitted August 20th, 1881, with a large femoral hernia, irreducible, and apparently strangulated.

Patient had had a hernia for fifteen years. When first noticed it was about the size of a nut, and could be reduced. It gradually increased in size and became irreducible. For the last eight years it has remained about the same size. The hernia was always a little smaller when he was lying down. He had never worn a support or truss, and he never had pain in the hernia before.

Patient stated that at 11.30 a.m., whilst at work, he was seized with severe pain in the abdomen, radiating from the upper part of the neck of the hernia. He swallowed a dose of castor oil, but was immediately sick. On admission he had very violent pain at the neck of the sac, extending towards the umbilicus. The tumour was rather larger than a man's head, tympanitic in part, not tense, and there was no impulse on coughing. There was a hard tender swelling at the neck

of the sac, quite different in character to the rest of the tumour. A slight gurgling sound was heard on manipulation at the lower part of the sac. The acute pain was relieved by a subcutaneous injection of morphia. Several icebags were applied over the hernia, and a simple enema administered without result.

August 21st.—The severe griping pain had left him, but there still remained much tenderness about the neck of the sac. Small quantities of milk were retained by the stomach. Injections of morphia were given during the day, and at night an enema of castor-oil was administered, which was followed by the evacuation of some fæcal matter.

22nd.—Patient looking anxious. More tenderness about the neck of the sac; abdomen a little more distended; swelling at the neck of the sac harder and more distinct. As there was evidently some localised mischief at the neck of the sac it was determined to operate at once. At 11 a.m. I tried taxis under ether without any alteration taking place in the tumour. The hernia was then very carefully washed with carbolic soap. An incision was then made under the spray over the neck of the sac, and as relief was not obtained the sac was opened. About one pint of turbid serum escaped. The incision was prolonged down to the bottom of the sac. The contents were the cæcum and ascending colon, together with 5 or 6 feet of small intestine, and a large quantity of omentum, which was adherent to the bottom of the sac. Part of the omentum was inflamed and pressing against the cæcum. The intestines were considerably injected. The opening at the crural ring admitted two fingers, it was slightly enlarged with the hernia knife. I then removed a very considerable quantity of omentum, ligaturing it close to the cæcum, in several places, with stout silk. By patient manipulation of about twenty minutes the intestines were all returned into the abdominal cavity. The sac was dissected out, during which a large number of vessels required ligaturing. The portion of sac removed measured 26 inches in circumference, and was very thick and cartilaginous in places.

A radical cure was now attempted, by passing a number of stout catgut ligatures through the cut edges of the sac, and by this means the abdominal cavity was shut off. A large portion

of redundant skin was removed (28 inches in circumference), drainage tube introduced, and the wound, which was 8 or 9 inches in length, brought together by silk sutures. Antiseptic dressings were then applied. The patient suffered a good deal from shock for the first few hours after the operation, but in the evening he rallied, and appeared quite comfortable. He has had no abdominal disturbance since the operation. Antiseptics were left off on August 29th.

Sept. 3rd (twelve days after operation).—The bowels have been open naturally. Patient is taking ordinary diet. Abdomen free from distension or pain; wound looking well; a good deal of discharge from the lower part. Temperature normal.

Oct. 13th.—Patient convalescent.

Remarks.—I have recorded this case because from the size of the hernia the operation amounted to an abdominal exploration. The operation was performed at an earlier period than is usually recommended, considering the size of the hernia, and that no very urgent symptoms were present. There was, however, very definite local mischief about the neck of the sac, and the patient was not improving. I felt that if the operation was postponed until the patient was more exhausted he would have a much worse chance of recovery.

About one year and a half ago it fell to my lot to have charge of a case of femoral irreducible hernia, of about the same size, in a woman. The operation was delayed for several days because there was gurgling to be felt in the tumour, and was only determined upon when vomiting became urgent. Death occurred a few days afterwards from exhaustion.

The rate of mortality after operation in very large hernias, umbilical or otherwise, is very high, and is clearly dependent more on delayed operation than on the acuteness of the symptoms. The surgeon fears, in fact, to have a large quantity of intestines exposed, but, considering how tolerant the abdominal cavity is of gentle and cleanly manipulation and the sense of security that one feels in hospital practice now—by the use of antiseptic precautions—I believe that most surgeons would agree that interference should not be delayed

in these cases, when it is certain that distinct local mischief is going on in the hernia.

It is of great after advantage to the patient, when the sac has been opened, not only to relieve the condition for which the operation was performed, but to endeavour to evacuate the whole contents of the sac, and thus to relieve him from the burden of an irreducible hernia.

The radical cure as attempted certainly very much lessens the tendency of the hernia to recur, and enables the man to wear a much lighter form of truss; but further, the shutting off in this way of the abdominal cavity, must have a very important influence on the chance of recovery. The rapid adhesion of the peritoneal surfaces to one another, prevents in a great measure the possibility of any septic process gaining access to the abdominal cavity, and thus in a short time after the operation complete antisepsis, which is so difficult or impossible to maintain for any length of time in this situation, becomes a matter of secondary importance.

ANALYSIS OF, AND REMARKS ON,
THIRTY-ONE CASES OF ENTERIC FEVER

TREATED IN ST. THOMAS'S HOSPITAL DURING THE PAST
YEAR.

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OF 31 cases of enteric fever admitted into St. Thomas's during the eight months from August, 1880, to March, 1881, 4 were treated by Dr. Bristowe, 8 by Dr. Stone, 12 by Dr. Ord, and by Dr. Harley.

TABLE I.—*Shows the admissions for each month.*

August	4
September	8
October	6
November	10
December	0
January	2
February	0
March	1
	<hr/>
	31

We have again to note the prevalence of the fever during the month of November, and also a remarkable absence or diminu-

tion of cases during the succeeding four months. The frequency of the fever during November is in accordance with our figures of last year, but it is contrary to the experience of the London Fever Hospital, which records a slight preponderance of cases in October.

Sex and age.—The sexes of our cases were equally divided, 16 being females and 15 males. As regards age, the youngest was 9, the eldest 40, both in females.

TABLE II.—*Ages of patients.*

Under 5 years.	5 to 10 years.	10 to 15 years.	15 to 20 years.	20 to 30 years.	30 to 40 years.	40 to 50 years.	
0	2	10	8	9	2	0	=31.

The mean age of the 38 cases was 19 years, individually for females 19·7, for males 18·5.

The preceding table shows the remarkable and well-known prevalence of the fever amongst persons under 30 years; thus, 29 out of the 31 are under that age, or over 93 per cent. We had no case admitted under 5 years, or over 40.

Deaths.—Three patients died, all of them being males. The death-rate thus amounted to 9·6 per cent., or 1 in 10½ cases. This mortality rate is more favourable than in any of the four years we have analysed the typhoid epidemics; but, as the number of cases this year is considerably smaller than hitherto, the statistics on this heading are manifestly of little value by themselves.

The ages of those who died were 12, 21, and 25 respectively, the fatal termination happening on the thirty-fourth, thirty-fifth, and thirteenth day of fever.

The post-mortem examinations revealed perforation in two cases, whilst the third was complicated with contracted granular kidneys.

On carefully examining the notes of onset of illnesses, we have again to draw attention to the sudden commencement of the disease. The fever, in the great majority of our cases, did not come on gradually; but, on the other hand, patients were able to accurately fix the date of their seizure. The modes of

onset were various, and although the histories of the majority of our cases failed to record a prostrating character of commencement, still its date was very reliably fixed, whether by rigors, or by vomiting, or by belly pains, or by diarrhœa.

The following table (III) will show the duration of illness previous to admission :

In 3 cases, 5 days and under.	
„ 14	„ 6 to 10 days.
„ 8	„ 11 „ 15 „
„ 4	„ 21 „ 30 „
„ 2	„ the date of origin is doubtful.
<hr/>	
31	

Total duration of illness.—The average duration of febrile condition was practically five weeks (four weeks, six days). But it must be borne in mind that this statement is made only from those cases which recovered, and which were not complicated by relapse, thus eliminating any possible extremes caused by early death or prolonged relapses. The termination of the fever is fixed at that period when the morning and evening temperatures were normal for two successive days.

TABLE IV.—*Duration of febrile state in 28 cases of recovery ; stated in weeks.*

Recovery in 3rd week	.	1	Recovery in 7th week	.	3
„ 4th „	.	5	„ 8th „	.	2
„ 5th „	.	10	„ 11th „	.	1
„ 6th „	.	5	„ 12th „	.	1

The seven cases in which convalescence did not occur till after the sixth week were all well-marked cases of relapse. The case in which fever was prolonged into the twelfth week was possibly a good example of secondary relapse, which occurred in the ninth week, with renewed eruption, but associated with congestion of the bladder and pleurisy.

Of the three fatal cases the onset was accurately fixed in two ; in the third it is stated approximately. Thus, death occurred :

on the	13th (about)	34th	35th	day of fever.
and on the	5th	11th	28th	day of residence.

The mean length of residence in the hospital was nearly eight weeks (53·8 days). Three patients were presented in the fifth week, 2 in the sixth, 4 in the seventh, 7 in the eighth. The shortest period of residence in cases other than fatal was twenty-seven days; the opposite extreme was the case of double relapse before mentioned, and who remained 149 days under treatment.

Eruption.—The typical rash was observed on admission in 19 cases, which are classified below as regards the date of appearance of eruption and its duration.

TABLE V.—*Spots were present on the day of admission.*

In 2 cases on the 7th day, lasting 5 and 9 days respectively.

„ 4	„	8th	„	„	1, 5, 6 (fatal), and 42 days respectively. This last was a relapse.
„ 3	„	9th	„	„	1 (fatal), 8, and 32 days respectively.
„ 1	„	10th	„	„	1 day.
„ 1	„	11th	„	„	58 days. A double relapse.
„ 1	„	12th	„	„	18 „
„ 1	„	13th	„	„	7 „
„ 3	„	15th	„	„	4, 14, and 19 days respectively, the last being a relapse.
„ 1	„	21st	„	(about),	lasting 4 days.
„ 1	„	22nd	„	lasting	3 days.
„ 1	„	24th	„	„	5 „ (fatal).

The above figures speak for themselves. They are not, of course, conclusive upon which to establish statistics as to date of appearance and duration of spots, since the eruption was present on admission. They show, however, that the rash may be present at a very late period, even after the third week, unless we look upon those cases with eruption after the twenty-first day as probable relapses, a supposition which the histories of their previous illnesses by no means warrants.

TABLE VI.

On the other hand, the rash appeared *after* admission in seven cases, thus :

In 1 case on the 7th day, lasting 29 days. A relapse.					
„ 1	„	11th	„	2	„
„ 2	„	12th	„	5 and 7	days respectively.
„ 1	„	13th	„	3	days.
„ 1	„	22nd	„	3	„ Not a relapse.
„ 1	„	28th	„	4	„ In a relapse.

The average date of appearance of rash in those cases in which it was observed on admission was on the twelfth day. This, of course, may be fallacious, as we have no means of ascertaining whether spots were present, and, if so, at what date, prior to the patient's coming into the hospital. On the other hand, the second table, showing the date the eruption appeared subsequent to admission, is free from the above objection. We find that in the seven such cases the average date of first eruption was the fifteenth day, appearing in the earliest case on the seventh day and lasting twenty-nine days, and in the latest on the twenty-eighth day and lasting four days. This was during a relapse, there having been no spots during the primary fever.

Besides the above, in 5 cases, or 16·1 per cent, there was no appearance of rash during their stay in the hospital. Of these five, two were admitted during the first week of their illness, and one each in the third, fourth, and fifth weeks. It is more than possible that in the latter three cases the eruption may have been present before they came under hospital observation. Of the five cases without rash four were females, one male; none of them died. These figures would seem to point to an error in the theory that spots are more frequent in young children and females; or, in other words, that the rash is best marked in such patients who have delicate skins. The respective ages of these five patients were 11, 15, 17, 18, 30 years.

In Case 10 there appeared at the end of the twelfth week an eruption resembling the *tache bleuâtre* of French authors, with the exception that it was elevated above the surrounding skin. This was the prolonged, double-relapse case of Dr. Harley's.

Temperature.—On the two following pages are tabulated the average temperatures for morning and evening, together with

their variations, of the 31 cases, thus showing the course of fever in the different patients.

The number of cases of hyperpyrexia were very few; hence the use of the graduated bath has been limited in this year's epidemic. For example, in ten cases only (almost one third), of which two were fatal, did the thermometer register 105° Fahr., and in only three of these did the fever rise above this point. The highest recorded temperature was 105.6° , which occurred on the seventeenth day of the disease. The patient recovered.

A highest temperature of 104° and below 105° was frequent, namely, in 13 cases, or nearly a half, with one death; whilst temperatures between 102° and 104° included 8 cases, or over a fourth. There were no highest evening temperatures below 102° .

In 12 cases, or 38.7 per cent., the highest point of the fever, so far as was observed by us, occurred on the day of admission. This is a point to which we have drawn attention in previous years, and upon which we shall dilate at a future period in our digest of the last three year's epidemics.

On the other hand, very low morning temperatures were frequent, for we find one with a record of 94° , five with 95° , and sixteen with 96° ; or, in other words, 21 cases whose lowest morning temperatures were between 94° and 96° . Only one of these was fatal, a boy, aged twelve years, in whom the temperature suddenly fell from 102.4° to 96.8° at the date of perforation of the bowel.

Whilst on this subject, we think that sufficient attention has not been given to convalescence temperatures. It is an acknowledged fact that, in fevers terminating by crisis, such crisis is generally in the form of a sudden fall of temperature from previous fever heat to a normal or even subnormal range. But we find that such is frequently the case in enteric fever—that is to say, not unfrequently we have met cases in which there is a sudden fall, often amounting to 5° or 6° , and once to 10° , and without perforation, or hæmorrhage, or diarrhœa, to account for such a fall. There may have been a sweating, or in one case severe delirium, and even a diarrhœa, to mark this crisis, but that such phenomena are of a critical nature is proved by the temperature showing no reactionary return above, or only slightly above, the normal range.

Besides this, our figures lead us to the conclusion that such

Case.	Highest evening temperature.	Lowest morning temperature.	1st week, average.			2nd week, average.			3rd week, average.			4th week, average.			5th week, average.			6th week, average.			7th week, average.			8th week, average.			9th week, average.			10th week, average.			11th week, average.			12th week, average.			Remarks.
			M ¹	E.	V.	M.	E.	V.	M.	E.	V.	M.	E.	V.	M.	E.	V.	M.	E.	V.	M.	E.	V.	M.	E.	V.	M.	E.	V.	M.	E.	V.	M.	E.	V.				
1	104·6, day of admission, 8th	96·0, 23rd	99·1	102·7	3·6	97·5	100·0	2·5	97·0	96·8	·2																									
2	103·6, day of admission, 8th	96·8, 15th	100·2	101·6	1·4	97·4	98·2	·8	97·3	99·1	1·8	The variation in the 5th week was due to orchitis.	
3	104·8, 23rd	97·2, 32nd	100·8	103·1	2·3	98·0	99·7	1·7	97·1	96·8	·3																			
4	104·4, day of admission, 12th	96·2, 42nd	102·0	103·5	1·5	99·8	102·2	2·4	99·1	102·3	3·2	100·2	102·7	2·5	97·0	99·8	2·8	97·4	98·0	0·6	Slight relapse in the 5th week.	
5	103·6, 13th	97·2, 26th	...	...	...	101·2	102·5	1·3	99·9	101·6	1·7	98·1	99·2	1·1	98·1	98·0	·1																				
6	104·0, 25th	96·4, 35th	...	...	...	...	...	...	...	...	...	99·7	102·6	2·9	99·8	100·8	1·0	96·5	98·3	1·8																	
7	105·0, 11th	96·2, 22nd	...	...	...	102·0	104·6	2·6	99·8	102·5	2·7	96·8	98·8	2·0	97·1	98·2	1·1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	A fall in the average of 3rd week was associated with hæmorrhage.
8	105·0, 24th	95·0, 25th	100·0	103·2	3·2	99·6	102·9	3·3	101·8	104·0	2·2	98·5	102·8	4·3	96·4	98·0	1·6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	There was in the 5th week a sudden immense fall of temperature from 105° to 95°, with no hæmorrhage or diarrhœa, but marked delirium and subsequent low temperatures.
9	105·0, day of admission, 15th	96·8, 26th	...	...	...	...	...	...	101·3	103·6	2·3	97·9	100·4	2·5	102·5	104·2	1·7	101·6	103·6	2·0	96·2	96·5	·3	...	...	...	...	...	...	...	...	...	...	...	...	...	A relapse occurred in the 5th week, hyperpyrexia being treated with graduated baths. Good results.
10	105·0, 59th, or 3rd of relapse	95·8, 69th, or 13th of relapse	101·8	103·9	2·1	99·2	101·9	2·7	100·4	102·6	2·2	101·2	104·0	2·8	98·5	101·3	2·8	97·8	98·8	1·0	97·9	98·5	·6	101·9	104·1	2·2	98·5	101·8	3·3	97·2	99·7	2·5	98·0	97·8	·2	A relapse in the 5th week, but with no fresh spots; a second relapse in the 9th week, with fresh spots and renewed delirium.
11	104·8, 19th	97·8, 38th	...	...	...	...	...	...	102·6	104·3	1·7	102·0	103·5	1·5	98·8	100·5	1·7	98·8	99·3	·5																	
12	105·2, 34th	98·6, 35th, day of death	...	...	...	101·7	103·9	2·2	102·5	104·4	1·9	102·6	104·2	1·6	99·8	102·9	3·1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	The temperature was controlled in the 2nd and 3rd weeks by graduated baths, and in the 4th and 5th weeks by cold sponging. The great fall of temperature on day of death probably denoted perforation, which was verified by p.m. examination.
13	105·0, 32nd, or 10th of relapse	96·8, 47th, or 25th of relapse	...	...	...	99·4	102·1	2·7	98·0	101·1	3·1	101·5	102·8	1·3	102·0	104·4	2·4	102·2	104·0	1·8	97·6	99·8	2·2	...	...	...	...	...	...	...	...	...	...	...	...	...	Relapse in the 4th week, commencing on 23rd day, with fresh spots.
14	105·0, 9th	96·0, 35th	100·0	103·1	3·1	99·6	103·5	3·9	97·6	100·9	3·3	99·2	101·2	2·0	99·0	103·0	4·0	98·2	100·7	2·5	97·5	99·9	2·4	98·4	98·6	·2	...	...	...	...	...	...	...	...	...	...	Relapse in the 4th week, commencing on the 24th day with fresh spots.
15	104·4, 25th	96·4, 48th	...	...	...	100·1	103·3	3·2	98·6	102·9	4·3	102·6	104·0	1·4	101·6	103·3	1·7	98·5	102·2	3·7	97·2	99·9	2·7	97·0	98·0	1·0	98·8	101·2	2·4	98·9	100·4	1·5	97·3	98·5	1·2	...	A relapse occurred in the 4th week, with fresh spots, and a marked recrudescence in the 9th week. Temperature controlled by sponging.
16	104·0, day of admission, 8th	96·2, 51st	...	...	...	101·2	103·7	2·5	99·9	102·9	3·0	97·6	100·2	2·6	98·1	99·1	1·0	100·0	103·0	3·0	99·0	102·1	3·1	96·9	98·2	1·3	...	...	...	...	...	...	...	...	...	...	Relapse at end of 4th week.
17	104·6, day of admission, 10th	94·0, 27th	...	...	...	101·5	103·4	1·9	100·0	102·4	2·4	95·8	99·3	3·5	96·6	97·8	1·2																				
18	105·0, 12th	100·8, 10th	...	...	...	101·9	103·8	1·9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Death on 13th day. P.m. showed collapse of lungs and early interstitial nephritis.	
19	102·6, 20th	97·0, 28th	...	...	...	...	...	...	98·7	100·9	2·2	97·5	98·5	1·0	98·0	98·5	·5																				
20	104·6, 9th	96·6, 20th	103·2	103·9	0·7	100·3	103·7	3·4	98·9	102·0	3·1	98·6	102·2	3·6	97·9	101·8	3·9	97·2	98·6	1·4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Complicated by abortion on the 20th day of fever.	
21	105·2, 11th	96·2, 26th	...	...	...	102·2	104·5	2·3	100·4	103·6	3·2	98·1	102·0	3·9	97·5	98·2	·7																				
22	103·8, 11th	95·0, 26th	...	...	...	101·0	103·2	2·2	100·5	102·9	2·4	97·1	99·3	2·2	97·4	98·4	1·0	98·4	98·4	0·0																	
23	104·4, day of admission, 8th	95·8, 25th	...	...	...	100·8	103·6	2·8	98·2	102·0	3·8	96·7	99·4	2·7	96·5	98·0	1·5																				
24	102·2, day of admission, 10th	95·4, 24th	...	...	...	98·7	100·3	1·6	97·1	98·5	1·4	97·2	98·7	1·5																							
25	104·6, 15th day	96·2, 28th	...	...	...	...	...	...	...	...	...	99·9	103·1	3·2	97·8	100·0	2·2	97·2	99·6	2·4																	
26	103·6, day of admission, 15th	96·6, 34th	...	...	...	...	...	...	98·8	102·2	3·4	98·9	102·3	3·4	98·0	100·5	2·5	96·6	96·8	·2																	
27	104·0, day of admission, 24th	96·8, 32nd	...	...	...	...	...	...	...	...	...	101·5	103·8	2·3	100·3	101·5	1·2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	Death on the 34th day from perforation, hence low averages of temperature in the 5th week.		
28	103·8, day of admission, 8th	96·2, 19th	...	...	...	99·8	102·2	2·4	97·5	101·2	3·7	97·9	100·0	2·1	97·3	99·2	1·9	98·0	99·6	1·6																	
29	104·8, day of admission, 29th	97·0, 46th	...	...	...	...	...	...	...	...	...	...	...	...	101·5	103·0	1·5	98·8	101·3	2·5	97·9	98·6	·7	97·8	97·3	·5	...	...	...	...	...	...	...	...	...	Admitted during 5th week; fever declining.	
30	105·6, 17th	97·6, 41st	...	...	...	...	...	...	102·7	104·9	2·2	101·9	102·9	1·0	99·8	101·3	1·5	98·3	99·9	1·6	97·0	97·2	0·2														
31	103·8, 8th	98·0, 24th	...	...	...	101·9	102·6	·7	99·4	102·0	2·6	97·0	97·3	·3																							

falls of temperature below normal during, or at the date of commencement of convalescence, is generally indicative of a prolonged severe attack if seen in adults, but that it is an especially well-marked feature in young subjects; nay, that it is perhaps the rule rather than the exception in such patients. We have frequently been able to recognise an enteric temperature paper by its presenting towards its end a frequency of figures ranging from 94° to 97.5° Fahr. To be more exact, we have taken a mean of averages of morning and evening temperatures in 12 such cases during the first week of convalescence, and we find that the evening temperature averaged 97.5° , the morning 96.8° ; and that the average age of the 12 to have been seventeen years, although it includes one patient who was forty years old, but in whom the fever process was continued by relapses over twelve weeks' duration.

Pulse.—There is nothing exceptional to be observed this year about the pulse-rate. Most of the facts recorded in previous years may again be noted. Thus, in twelve cases, or 38.7 per cent., the greatest frequency of pulse was on the day of admission. This exactly corresponds in number with that of highest temperatures on the day of admission; and further, of the twelve individual cases which presented the highest fever on admission, no fewer than eight of them also had a highest pulse-rate on the same day. This again confirms our suspicion that removal of patients to a hospital is a strong factor in producing constitutional disturbance and apparent high fever.

In only four cases was the highest pulse noted below 100; the lowest rate of them being 72 in a man aged 37. A pulse of between 100 and 120 was observed in twelve cases, and of between 120 and 140 in ten cases, of which one was fatal.

A pulse-rate of 140 and upwards included four cases with two deaths; the greatest frequency being 156, which rate occurred twice.

In the three fatal cases the rate of pulse amounted to 126, 144, and 150 respectively.

We take it as indicative of the mildness of last year's epidemic that in only two patients was the systole at all deficient in power or tone. Reduplication of the first or second sounds happened occasionally in the cases which were complicated with lung or renal mischief.

Diarrhœa in more or less severity occurred at one time or another in twenty-eight out of the thirty-one patients. In the other three it was absolutely absent from beginning to end of the fever.

But the above statement must be supplemented by further figures, which are interesting from their bearing on hospital practice in enteric fever. There existed *diarrhœa* in moderate degree in seven cases with two deaths, in severity in eight cases with one death, and very severely (amounting to over six evacuations per diem) in two cases.

But our investigations should not stop at this point or they may be misleading. On further analysis of cases we find that out of twenty-eight patients who had *diarrhœa*, in more or less severity, in eleven of them, or 39·2 per cent., there also existed constipation at one or other period of their illness. The constipation was not unfrequently obstinate, it occurred oftenest about the fourth week and lasted during early convalescence; and, as we have formerly seen, the means adopted to overcome it have led in some cases to recrudescence and even to relapse.

The use of enemata in the treatment of our hospital enteric fever cases has been as frequent, if not more frequent than that of any other remedial agent, and certainly much more extensive than remedies to check the opposite condition, *diarrhœa*. Various reasons and causes have been given to account for this frequency of constipation. We suggested last year that the presence of *diarrhœa* may probably indicate extension of the fever process to the solitary glands of the large intestine, and apparently the post-mortem examinations on our three fatal cases of this year somewhat strengthened this, as two out of three had well-marked lesion of the great bowel, and both had marked *diarrhœa*.

Again, it is interesting to note the possible factor of season of year. For example, out of ten cases admitted during November one half had constipation at some period of their fever, this being nearly a sixth part of the whole number of cases under review.

On the other hand, it would be of great interest to compare statistics of constipation occurring in hospital enteric patients where a milk diet is strictly ordered and rigidly enforced, with similar figures from cases in private practice where there is

often reason to doubt that regimen is not so faithfully observed.

Abdomen.—Belly symptoms occurred in every case except two; of these “gurgling” or pain in the right iliac fossa was frequent, including twenty-two cases. There was splenic enlargement in seventeen, whilst distension of the abdomen existed at one time or another in all, and notably, as might be expected, in those who had diarrhoea at all approaching to severity.

Tongue.—A condition of this organ, viz. thickly coated with yellowish fur, with a tendency to redness at the tip and edges, and which may be looked upon as almost typical of the fever, occurred in the early stage of nearly all the cases. But that certain conditions of the tongue are sure indications of grave symptoms, and an accompaniment to high fever is further established by the following figures. The tongue was dry in eight cases, dry and brown in nine, and tremulous in four, amounting to twenty-one cases in all, which include all the three fatal cases, and all those (10) who had a temperature of 105° or upwards. This, again, coincides with our experience of former years. Fissuring was noted in four cases, as was also a glazed condition of the organ.

Respiration.—The average rate of respiration was 28, but it must be stated that the frequency was not invariably noted. The highest frequency was 40 in a boy with healthy lungs, the lowest 22, also in a boy. Auscultation revealed pulmonary disorders in twenty-seven out of the thirty-one cases, but in the majority it only amounted to the congestion so frequently met with in typhus and other specific fevers. In nine out of the twenty-seven there were severe lung complications, however, which are referred to further on.

No chemical observations were made on the respired air, nor were any volumetric measurements taken. The peculiar character of respiration known as “Cheyne-Stokes’s” is recorded as occurring once.

Urine.—The only clinical observations made in respect of urine were specific gravity, the presence or absence of albumen, with the addition (especially in Dr. Ord’s wards) of an examination for the presence of indican.

The sp. gr. ranged from 1010 without albumen, in a woman aged 29, to 1034 without albumen or sugar, in a girl aged 11.

There were only five cases with a sp. gr. lower than 1015, and four with a higher sp. gr. than 1030.

As regards the presence of albumen it was detected in eight cases, in six of whom it was certainly only temporary, and in the remaining two, although not noted as such, there is every reason to believe it was temporary only, its presence being probably due to slight renal congestion parallel to a similar congestion which was present in the lungs, and which occurs in most specific febrile processes. Of the eight cases in which albumen was observed, its presence was detected on admission in six. In the other two it appeared on the seventeenth and thirty-third days respectively. An indican reaction in the urine was demonstrated in all cases of severe diarrhoea without exception. Its presence was better marked at some periods of the fever than at others, but our experience leads us to the opinion that in a great majority of cases it may be detected in the early stage of diarrhoea, and that the reaction disappears or becomes fainter as the purging ceases or convalescence approaches, but that it may again be detected in the urine during a relapse, especially if belly symptoms are at all prominent. We are convinced of its diagnostic value and aid in cases presenting any obscurity or doubt.

Delirium.—We have endeavoured in former reports to associate delirium with the occurrence of high fever, and we have suggested that this coincidence in a measure tends to point to the administration of graduated baths in hyperpyrexia as a curative agent, since by reducing the temperature we also relieve the delirium. Or, in other words, the delirious state is in many cases symptomatic of, and caused by, high fever, and by lowering the heat of a patient we control delirium. Now, marked delirium occurred in eleven cases, or within a fraction of 35·5 per cent. The intensity of the delirium varied from “*slight rambling*,” which included three cases, to “*moderate*” (two cases) and “*severe*,” under which category the remaining five are placed. In five of the eleven cases the greatest intensity of delirium or its very onset exactly corresponded in date with that of highest temperatures, and in three others the events were only two days apart. In the remainder, however, (3) there was a week intervening between the two phenomena, the date of highest fever preceding that of delirium. Further, in all

cases in which delirium was severe the thermometer registered 105° or upwards. We may also observe that in those cases (2) in which a graduated bath was used or cold sponging employed to reduce temperature, the most marked effect on the patient was to restore the mind to consciousness, however severe the delirium may have been beforehand, but that wandering again returned whenever the temperature rose to its previous level.

Other nervous symptoms recorded in addition to the above were marked subsultus and picking of the bed-clothes in two cases, one of them terminating fatally.

Complications.—We have continued the plan of classification of complications which has been adopted in former years, and was initiated by Dr. Ord. Under this method complications are divided into four groups: the first comprising such “accidents” as may occur during any febrile process; the second, such disorders as are somewhat related with the fever; the third group includes any disorder or sequel as is related with any constitutional idiosyncrasy, or any particular condition of the patient.

In Group I there are—

- (1.) Orchitis, one case, on the 11th day, unattended by urethral discharge.
- (2.) Cystitis, one case, on the 38th day, in a male aged 37.
- (3.) Retention of urine, one case, in a male aged 25.
- (4.) Delusions, one case, from the 15th to 43rd day.
- (5.) Albuminuria in eight cases (previously noted).
- (6.) Vomiting (urgent) in one case.

In Group II—

- (1.) Congestion of lungs (marked) in two cases. The apex was the seat of affection in one, but with no subsequent physical signs of phthisis.
- (2.) Pneumonia (severe), two cases.
- (3.) Bronchitis, one case.
- (4.) Pleurisy, four cases. In one it was double
- (5.) Epistaxis, one case.
- (6.) Hæmaturia, one case.
- (7.) Peritonitis and perforation, two cases, on 31st and 33rd days respectively.
- (8.) Deafness, two cases.

In Group III—

- 1.) Endocarditis, five cases, of which one must be considered doubtful from the character and situation of the murmur.
- 2.) Gouty inflammation of joints, one case.
- (3.) Abortion, one case, on the 20th day. The period of frequency was not accurately stated.

The above list includes many trivial disorders which may be perhaps considered hardly worthy of being classified as complications. But the clinical history of enteric fever teaches us that there are few diseases which bring in their train such a number of undercurrent disorders of a more or less grave character. The severity, character, and complexity of such complications seem to be influenced by the special character of the fever, its duration or its intensity; and also in no small measure by the constitutional weakness, or especial proneness to maladies, induced by certain taints (hereditary or acquired) of the individual. And this in a great measure constitutes the basis of Dr. Ord's classification of complications. We know of no disease which more thoroughly tests the weak points in a subject's health, or which leaves him more liable, by the exhaustion it produces, to take on a diseased condition, from which he would probably have escaped had he not contracted the fever. This feature is not a novelty to observers, and is constantly acknowledged and recognised as producing difficulties of diagnosis. Undoubtedly a tubercular diathesis which otherwise might have remained with no appreciable manifestation for perhaps years, may be made active by the fever process. Again, we have seen it light up an ague which had remained dormant for months; and in more than one case of so-called strumous glands the subsequent convalescence after enteric was delayed by exacerbation of the adenoid induration, leaving the patient in a more damaged condition than previous to the fever. In addition, it is probable that the severity of an epidemic may be gauged by the different characters of the complications, and the different organs or tissues they affect. For example, last year's epidemic was undoubtedly a mild one, as is shown by the decreased number of our patients, and also by the fact that there were a goodly number of cases admitted into St. Thomas's which were almost undoubtedly enteric fever, but presented a deficiency of pronounced symptoms, and which frequently terminated abruptly, or, as has been aptly termed, abortively. Such cases are commented on by Murchison, and would probably, as he points out, have been included in former years under the heading of simple fever.

But some complications which were frequent during a former year of severe epidemic, and which were most frequent in

severe cases, are conspicuously absent or nearly so from this year's list. Deafness, for example, was only observed in two cases. Epistaxis and intestinal hæmorrhage are also almost eliminated, as is also urgent vomiting. All this tends to support the opinion that certain complications indicate the severity of an attack of enteric fever; and conversely, that the mildness of an epidemic may be recognised by their less frequent occurrence.

Treatment.—On this subject there is very little to add in this year's report to what has been said in former years. The use of salines has been slightly more frequent than that of mineral acids, a fact which may be accounted for by the non-prevalence of diarrhœa. But it is interesting to note that out of twelve cases no less than eight had no medicines at all, and the remaining four only occasional and temporary remedies to check a tendency to diarrhœa. That is to say, that had such patients remained free from purging or diarrhœa at all approaching to severity, the bed tickets of nearly half the cases would have been without prescriptions for ordinary febrile remedies; and this expectant line of treatment has been general with all the physicians alike at St. Thomas's.

When diarrhœa has called for treatment, opium or its derivative, morphia, has been employed, most frequently in the form of enemata with starch, and only occasionally has it been given by the mouth. There seems an increasing tendency to treat diarrhœa by this method, as being probably most expeditious in action.

For high temperatures, quinine has been given in some three or four cases, but with only partial success. It has undoubtedly controlled hyperpyrexia, but only very temporarily, and then only when given in such doses as produced effects which may be called toxic.

In only two cases (Nos. 9 and 12) were graduated baths administered; and although one of the patients died, it is claimed that the baths effected their immediate purpose in both. The cause of death in the fatal case was perforation, the fatal event occurring three weeks after bathing. There will be found below a table showing the dates at which such baths are given, with their effects on the temperature and pulse. We may state that the condition which has generally guided the

prescribing of a graduated bath has been that of a temperature of 105° , and showing a rising tendency, or the occurrence of that observation at such period of the day as would probably prognosticate a greater heat at night. Thus, if the thermometer recorded 105° or upwards at about 4 o'clock in the afternoon, there was good reason to infer that the highest point of hyperpyrexia had not yet been reached; and, as we have shown, the great fatality in enteric fever in cases when the temperature rose to 106° , any remedial agent which shall rapidly and safely reduce such heat seems clinically indicated.

The effect of such baths on the temperatures was very marked, as will be seen below; and a similar observation applies to the pulse frequency. We have before drawn attention to the abatement of delirium.

In the second bath case cold sponging was subsequently resorted to when the thermometer in the axilla registered 104.2° , with signs of its still rising.

TABLE VII.—*Of graduated baths, &c.*

Case.		Date.	Hour.	Day of fever.	Bath, temp. reduced from	Duration of bath.	Patient's temp. reduced from	Pulse fell from	Remarks.
No. 9	1st bath	Sep. 27	5.30 p.m.	26th	95° to 76°	in 20 min.	105° to 101.5°	120 to 112	Death 3 wks. afterwards.
„	2nd „	„ 27	10.30 „	26th	95° to 78°	„	104.8° to 102.4°	132 to 120	
No. 12	1st „	„ 29	9.0 „	14th	95° to 75°	„	104.7° to 98°	108 to 84	
„	2nd „	„ 30	7.10 „	15th	Not noted	Not noted	105.0° to 97°	Not noted	

In another case (No. 15) cold sponging was applied for three days, whenever the temperature rose to 104° , with good effect, reducing the heat generally by 2° , but only temporarily.

The treatment of constipation has given rise to more anxiety than that of diarrhoea, owing to its great prevalence either during the fever or convalescence; and it will be seen further on, that from the relation of constipation to relapses and recrudescences it is an important subject.

Again, as in the opposite condition, the general practice at

St. Thomas's has been to administer remedies by the rectum. Simple enemata, or with castor oil added, have been used freely, the bowels not being allowed, as a rule, to remain without an action for a longer period than three days.

As regards drugs used in the treatment of delirium, there is very little to be said beyond that reported in former years. Chloral seems to have been more freely used than previously; also large doses of bromide of potassium. Opium was prescribed for this symptom much less frequently.

Stimulants form an interesting item in the dietary columns. Eight patients, or 25·8 per cent., were treated entirely without alcohol. But it is obvious that in such a few cases the particular practice of one physician may greatly affect figures in their relation to the general rules of practice in hospital wards; and we find such has been the case, one physician using much less alcoholic stimulant than his colleagues.

Alcohol (brandy or port wine) was ordered in two cases only on admission; in four during the second week of fever; in five during the third week; in four in the fourth week; in five in the fifth week; in two in the sixth; and in one during convalescence; making twenty-three altogether. The amount of stimulant varied from two ounces of port wine to eight ounces of brandy per diem, the wine having been given most frequently towards the end of the fever, whilst brandy was almost entirely restricted to those days when the fever was at its height.

GENERAL TABLE OF RELAPSES.

TABLE VIII.—*Of duration in days in the relapse cases.*

Case.	Age and sex.	Primary fever.	Intermission.	Relapse.	Total duration of fever.
No. 9	16 F.	25	2	17	44
„ 10	40 F.	44	13	22	79
„ 13	14 M.	21	1	26	48
„ 14	12 M.	20	3	26	49
„ 16	21 M.	27	7	18	52

ABSTRACT OF CASES OF RELAPSE.

CASE 1. *Severe primary attack, lasting into the fourth week ; relapse on the twenty-eighth day ; graduated baths ; recovery.*—(No. 9), A. P—, æt. 16, milliner, admitted into Lydia Ward, under Dr. Ord, September 9th, 1880, on the fifteenth day of fever.

On admission she had high temperature (105°), diarrhœa, a copious eruption, distended abdomen, with pain and gurgling in right iliac fossa. Her fever abated in the fourth week, but on the twenty-eighth day the temperature again rose from 98.5° the previous evening to 100.2° , and continued high during the following week, with fresh spots, delirium, but less severe diarrhœa than during the primary attack, and eventually constipation during convalescence. The hyperpyrexia during the relapse was treated by graduated baths with good results.

There was no error of diet to account for relapse.

CASE 2. *Primary attack mild ; relapse on the twenty-eighth day, with subsequent remission of fever ; and fresh hyperpyrexia on the fifty-seventh day, due to complications ; recovery.*—(No. 10), S C—, æt. 40, female, cook, admitted to Christian Ward, under Dr. Harley, on the 14th September, 1880.

She had been ill ten days on admission. The first attack was comparatively mild, though prolonged. There was a well-marked eruption with distended abdomen, spleen felt below the ribs, and slight diarrhœa ; but the temperature was not particularly high (104.4°). On the forty-fourth day the temperature was normal, but at the commencement of the ninth week there was a sudden rise of temperature from normal to 103.2° , and eventually on the fifty-ninth day to 105° , a pulse rate of 156, renewed diarrhœa with hæmorrhage and spots, also a return of delirium. The date of convalescence was postponed to the seventy-ninth day by such severe complications as pleurisy, albuminuria, and congestion of the mucous membranes of the bladder with hæmaturia.

The commencement of the relapse occurred two days after the ordering of fish in the patient's dietary.

CASE 3. *Mild attack ; severe relapse on the twenty-third day , recovery.*—(No. 13), J. F—, æt. 14, male, admitted to Arthur Ward, under Dr. Harley, on October 1st, 1880, being the eighth day of fever.

On admission the belly was tympanitic, spleen to be felt below the costal arch, pain and gurgling in the right iliac fossa ; the temperature was $103\cdot6^{\circ}$, which was the highest point attained during the primary fever, gradually subsiding till [the twenty-second day, when it was as low as $96\cdot7^{\circ}$. There were no spots, and no diarrhœa during the primary fever.

The relapse commenced on the twenty-third day, the temperature running up to 104° during the forty-fourth week and to 105° in the fifty-fifth week. A typhoid eruption first made its appearance on the sixth day of relapse or the twenty-eighth of fever, and there was attendant delirium, a pulse rate of 124° (highest), but again constipation, as in the first fever. Convalescence was not attained till the fiftieth day.

There was no direct connection between diet, and the relapse, although it occurred eight days after “ Bread-and-milk ” diet was ordered. It may be noted, however, that the bowels were constipated and were only relieved by enemata.

CASE 4. *Mild primary attack, short intermission ; relapse on the twenty-fourth day.*—(No. 14), A. J—, æt. 12, male, admitted to Arthur Ward, under Dr. Harley, on the 6th October, 1880. Ill three days before.

On admission there was gurgling in right iliac fossa ; spleen to be felt below the ribs, but absence of diarrhœa ; the eruption made its appearance on the seventh day. He had also right pleurisy and congestion of the lung. During the first week of fever the temperature was not high, averaging $103\cdot1^{\circ}$, but with marked morning remissions, the variations averaging $3\cdot1^{\circ}$. Subsidence took place during the third week (twentieth day), although the temperature was never quite normal during the remission. On the twenty-fourth day there was a return of fever, with a fresh eruption on the thirtieth day, or seventh of relapse ; but again there was constipation, and also an absence of delirium. A normal temperature was not reached till the fiftieth day.

The relapse began on the evening of the day on which animal food was first allowed.

CASE 5. *Severe primary attack ; relapse on the thirty-fifth day ; recovery.*—(No. 16), T. H—, æt. 21, male, carman, was admitted into George Ward, under Dr. Ord, on the 19th October, 1880. He had been ill seven days before.

Copious rash on admission, slight delirium, and no diarrhœa, the bowels being moved as a rule once a day. There was tenderness and gurgling in the right iliac fossa, but no enlargement of spleen to be felt. The average evening temperature gradually declined from $103\cdot7^{\circ}$ in the second week to $102\cdot9^{\circ}$ in the third, and $100\cdot2^{\circ}$ in the fourth. This was followed by a complete week of normal temperatures ; but on the thirty-fifth day there was again a rise to $100\cdot4^{\circ}$, and eventually to $103\cdot4^{\circ}$. Fresh eruption on forty-second day or eighth of relapse, but no diarrhœa. He was well on the fifty-second day.

The relapse seems to be connected with the use of laxatives, although it commenced three days after a dietary of “Bread and butter.”

In concluding the remarks on relapses during last year, there may be noticed the comparative few number of cases, the non-severity of the primary attacks, which, taken with an absence of severity of other usually well-marked symptoms, probably indicate the mildness of the epidemic. It is an interesting coincidence that those cases which were complicated with relapse should have been admitted into the hospital within a short time of each other, that is to say, during a space of six weeks, from September 9th to October 19th.

NERVE-STRETCHING

IN A CASE OF

SPINAL MENINGITIS WITH ATAXIC SYMPTOMS, DUE TO INJURY.

BY H. G. ARMSTRONG,

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THE following case of nerve-stretching, which was done with the idea of relieving pain, may be of some interest. It was one of the first done in this country, and the result has been more successful than that of most cases hitherto published. The patient had been under the care of Mr. Heap, surgeon to the Reading Amalgamated Friendly Societies, who called me in to see him, and to whom I am indebted for the notes of the previous history.

Previous history.—G. M—, æt. 40, married, had followed the business of a bricklayer. At the age of eighteen had gonorrhœa and a chancre, but does not recollect having any secondary manifestation of syphilis. Has always been temperate and regular in his habits. Has been married twenty-one years, during which time his wife has had seven children, of whom one is now living, three were born dead, and three died within a year of birth. Until his present attack has had good health. Five years ago he fell from a scaffold astride a piece of timber, injuring his lumbar and coccygeal regions, which laid him up for about a week. On resuming work he often had severe pains

in the sciatic regions, accompanied by violent tetanic spasms, which prevented his continuing work for a week or two at a time. The attacks of pain and spasm increased in severity and became more frequent, and three years ago he gave up work altogether, stating, as the reason, "that he could not feel his feet when going up a ladder." During these three years he has gradually got worse, and twelve months ago had to take to his bed, from which he has rarely, and for the last four months not at all, been able to get up.

Present condition.—Is a short, thick-set man, with florid complexion and bright, intelligent face. Muscles well developed; skin healthy. Complains of very severe lightning pains, confined principally to the legs and lower parts of the body, though they are occasionally felt in the upper extremities. These pains sometimes last continuously for several days and nights together, but at other times are momentary. Their severity is invariably aggravated by any change of weather, especially during rain or high wind. The lancinating pains and tetanic spasms in the lower limbs can always be produced by pressure on the skin over the coccyx. Does not attempt to leave his bed, as on trying to walk he falls down. Has no difficulty in raising a leg from the bed, but it is thrown violently from side to side, and he is unable to replace it on any given spot. Has entire loss of patellar tendon reflex, and complete anæsthesia of both lower extremities up to the groins; sexual power is lost but not desire. Has occasional attacks of gastralgia and disturbances of the bladder and rectum. The electric excitability of the muscles in the lower limbs is partially lost. Vision good, and no cranial nerves seem to be affected.

March 27th, 1881.—The patient being held in the lithotomy position, I cut down on the left sciatic nerve, about two inches below the tuber ischii, and holding it between the finger and thumb of each hand, stretched it violently. No anæsthetic was used, and the patient experienced no pain, either in the cutting through the skin or while the nerve was being stretched. The wound was stitched up and dressed with thymol lotion (1—8).

28th.—Has passed a very restless night. Complains of shooting pains in all parts of the body, more so in the arms and shoulders than he has ever had them before. Temp. 99·5°, pulse 100.

30th.—Still has pain, but not so violent.

31st.—Much better, pains very slight. Tactile sensibility is returning, as he can feel a finger drawn over the plantar surfaces.

April 2nd.—Has had no pain for twenty-four hours.

7th.—Tactile sensibility has returned over the whole of both lower extremities, the prick of a pin being distinctly felt in the thighs.

12th.—While lying on his back raised his legs easily from the bed and held them out straight, without any waving from side to side, and had no difficulty in replacing his foot on any indicated spot. No pain.

15th.—Has tenderness along the left sciatic nerve, and a return of the severe pains.

25th.—Free from pain; is dressed and sitting up, and with very slight assistance can walk round the room.

From this time he gradually improved, and on the 12th of May walked out, which he has continued to do regularly. Has return of pain whenever there is a change of wind, but very slight compared with that previous to the operation. Sexual power is restored.

June 24th.—This morning walked a distance of seven miles before breakfast without fatigue. Is much improved in appearance, having put on flesh since the operation. Sleeps well, and is seldom troubled with pain, which is only of a trifling character. Spends most of the day in the open air.

September 24th.—During the last three months has continued much in the same state with reference to his power of locomotion. Has return of the lancinating pains at intervals. These intervals are gradually becoming shorter, and the pains are again becoming more severe in character, but he still states that they are "nothing like" what they were before the operation. In walking he exhibits the characteristic ataxic gait.

October 7th.—No change since the last note.

Although the patient seems to be gradually relapsing into his old condition, a fair amount of success may be claimed for the operation. Before it was done his lower limbs were in such a perfectly anæsthetic condition that he was able to undergo it without the slightest sensation of pain. For twelve months before he had been almost entirely unable to walk, and for

three months had been confined to his bed ; and the lancinating pains, from which he was never free for more than two hours at a time, were so severe as to make his life a burden to him. The result of the nerve-stretching has been the recovery of cutaneous sensibility, and almost complete relief from the severe pains and tetanic spasms, and after a few weeks the ability to walk from eight to ten miles without fatigue. That this was the result of operating on one sciatic nerve is, I think, a point of much interest, showing that whatever the effect of stretching a nerve may be, it acts in some way, not on the periphery, but on the nerve centre. How the effect is produced there is no satisfactory evidence, but this should not, I think, be any objection to the operation. Many of our most useful drugs act in a way equally mysterious.

ON CASES
OF
INJURY TO THE OPTIC NERVE.

BY EDWARD NETTLESHIP.

(Clinical Lecture, given January 16th, 1882.)

THE following observations are printed nearly as they were given, with the omission of some unimportant remarks. I have since referred to previous publications, and added references to them in the footnotes. It will be seen that the cases and observations here offered agree very closely with those already published by Berlin, Leber, and others.

In many instances nerves, when cut or wounded, undergo repair and regain their functions; but the optic nerve seldom recovers from accidental injuries which are sufficient to cause immediate serious damage. This fact, which it is of importance to bear in mind, might perhaps be accounted for in several different ways. No doubt in many, probably in nearly all, the cases of damage to the optic nerve the injury is either a serious crushing of a certain length of the nerve in the optic canal, or a combination of crushing and tearing, from either of which it would be less likely to recover than from a simple section.¹

There may also be peculiarities in the anatomical relations of the optic nerve which render its repair less easy. The

¹ The cut ends of the optic nerve have been found united after the operation of optico-ciliary neurotomy, an operation upon blind eyes, revived within the last three or four years, and since largely performed on the Continent and in America, instead of enucleation, for the prevention of sympathetic mischief.

optic nerve is surrounded by a very distinct lymphatic space enclosed by a sheath of dense fibrous tissue (the "dural" sheath), and surrounding another thinner but still by no means loose sheath, which closely invests the nerve (inner or "pial" sheath). The nerve itself is subdivided, as are other nerves, into many little bundles by trabeculæ of fine fibrous tissue (neurilemma), and this tissue is more abundant and more closely felted together than in common nerves, so that the separate bundles of the optic nerve cannot be easily separated and followed up by dissection as they can, *e.g.* in the sciatic.

If the nerve be divided in front of the optic foramen, it is possible that the movements of the eyeball may interfere with the quiet apposition of the cut ends, or that the loose and abundant orbital fat may be intruded between them. Such an explanation might hold good when the damage was caused by a direct thrust through the orbital structures from in front, as in a case which I had the opportunity of seeing under Mr. Hutchinson's care at Moorfields, and which is published in his paper on the pupil in 'Brain.'¹ But in the more common cases the accident is an injury to the head, probably causing fracture of the roof of the optic canal, with crushing of and hæmorrhage into, the nerve, or perhaps occasionally tearing of the nerve on the brain side of the canal. Both conditions have been shown to occur in fatal cases of fracture of the base of the skull.²

When a cut nerve does not reunite it undergoes degeneration. After unrepaired wounds of the optic nerve we should therefore expect what we find, viz. that after a time the optic disc shows signs of atrophy.

The interval between the injury and the occurrence of visible ophthalmoscopic changes would no doubt depend partly on the distance of the injured spot of nerve from the eyeball. It is, on *à priori* grounds, very unlikely that this would often be near the globe, and the fact that the central retinal vessels have, in all the cases that I have seen, remained pervious, is proof that the seat of damage in them lay behind the point (about a quarter of an inch from the sclerotic) at which these

¹ 'Brain,' vol. i, p. 165.

² R. Berlin, 'Trans. Internat. Med. Congress,' iv, 115. London, 1881.

vessels enter the nerve. It is no doubt nearly always in or behind the optic canal,¹ and the earliest sign of atrophy of the disc may therefore, with some probability, be taken as a measure of the time occupied by the atrophic process in descending about one inch, or rather more, of the nerve.²

In Case 3 the disc was "pale and not quite clear" just two weeks after the accident.

In Case 5, examined under difficulties, two weeks and a half after the accident, the disc was normal or doubtfully pale, but at the end of six weeks was atrophied all over.

In Case 2 there was advanced atrophy with slight mistiness one month after the accident.

In some comparatively recent cases (Cases 2 and 3,) the disc may be slightly misty at the borders, but in others (Case 4, *e.g.*) it is perfectly clear and sharply defined. It is possible that the haze observed in Cases 2 and 3 was indicative of degeneration rather than inflammation, for there were no other signs of neuritis, such as swelling, vascular turgescence, or hæmorrhage. In old cases the disc is perfectly clear, of a white colour with a yellowish tinge, presenting a shelving atrophic cup, or at least great exaggeration of the ordinary physiological cup, with very marked stippling from exposure of the cribriform lamina, *i.e.* no evidence of adventitious products such as we often see after papillitis and in grey "progressive" atrophy. The retinal arteries are usually somewhat too small but never thready, and can always be proved to be pervious, by pulsating on pressure.

In five of the following six cases the eye was quite blind (no perception of light); in Cases 1 and 7 No. 20 J. could be

¹ Berlin's cases examined post-mortem prove this.—*Loc. cit.*

Experimental division of the optic nerve *and its blood-vessels* has been found to produce a bloodless condition (ischæmia) of the retina, followed by atrophy. Division of the nerve far behind the eye, without injury to the blood-vessels, caused atrophy. Division of the nerve at the optic foramen caused no visible atrophy of the disc, even after many months (*sic*). Temporary compression of the optic nerve caused sudden retinal opacity around the disc, which disappeared when the compression was removed (compare the appearances in embolism).—Marckwort, referred to in Knapp's 'Archives of Ophth,' x, 502 (1881).

² In two cases Leber and Deutschmann observed signs of atrophy three weeks after the injury to the head.—'Graefe's Archives,' xxvii, 1; abstract in 'Ophthalmic Review,' December, 1881, p. 34.

made out in some parts of the field, and in Case 4 the damage to the nerve was temporary, and may have been due to compression by blood in the optic canal.¹ It is interesting that in Case 1, though vision was very bad, there was no colour-blindness, whilst in Case 7 there was decided colour-blindness.

The state of the pupil is very characteristic of disease of one optic nerve in all these cases. When both eyes are equally lighted it is usually a little larger than its fellow; when the blind eye is shaded and lighted its pupil remains unaltered (absence of *direct reflex action*); when the sound eye is shaded and lighted the pupil of the blind eye usually acts quite well (presence of *indirect reflex action*). Its contraction during accommodation (*associated action*) is noted as quite good in Case 3. In Case 6 eserine and atropine were found to act as usual upon the iris of the blind eye.

As to the kind of accident and position of the injury, we find that in four of the cases there was a fall, in which the temporal or frontal region was struck on the same side as the eye afterwards found to be blind. In Case 6 the forehead was struck, and in Case 8 the "top of the head." In Case 5, where the child fell from a great height, the seat of the blow on the head is not stated, but there was contusion of the lids and protrusion of the blind eye immediately after the accident. In Case 6 the man fell down a ship's hold, and the base of the skull was probably fractured by the jam communicated through the spinal column. In the majority of the cases no severe head symptoms followed the accident.²

The blindness was discovered almost immediately after the fall in Cases 3 and 7, and the following morning in Case 2; in the others the sight was not tried until several days after.

¹ Berlin also suggests that in recoverable cases there has probably been sub-vaginal or intra-cranial hæmorrhage.—Ophth. Soc. of Heidelberg, 1879; reported in 'Ann. d'Oculistique,' t. 83, p. 69 (1880).

² It may be observed here that in all probability some of the cases in which injury to the frontal region has been supposed to cause loss of sight in some unexplained manner through the medium of the fifth nerve, were, in truth, examples of damage to the optic nerve by orbital fracture. This view is also taken by Fernandez ("On Amaurosis from Lesions of the Orbital Region," 'Amer. Journ. Med. Sci.,' 1881.—'Lond. Med. Record,' 1881, 474).

There is no reason, however, to think that the blindness was other than an immediate result of the accident in any of the cases.

I have never yet seen a case in which both nerves were involved; probably when this occurs the case generally ends fatally from extensive damage to the brain.¹

CASE 1. *Atrophy of the optic disc after injury to the optic nerve.*—Mr. W—, a student, states that four years ago he fell from a bicycle and struck his right temporal region. Some concussion but no severe symptoms followed. When the swelling had subsided three or four days later he found the right eye almost if not totally blind; it afterwards improved a little.

The accident occurred on Nov. 25th, 1877. On Dec. 3rd (eight days later) he consulted Mr. Power, to whom I am much indebted for the following notes. Mr. Power writes: “I saw him on Monday, 3rd Dec., about seven days and fifteen hours after the accident. On making a prolonged and careful ophthalmoscopic examination after the instillation of atropine, I satisfied myself that the disc of the right eye was paler than that of the left. It was sufficiently marked to enable me to give a tolerably certain forecast that the disc would become perfectly white from lesion of the optic nerve, the seat of lesion being the foramen opticum (in all probability), and that no recovery of vision would take place. The pupil contracted well with reflex (indirect), but scarcely at all by the direct, action of light. His vision slowly improved to about $\frac{10}{200}$, at which it remained stationary as long as I saw him. The field of vision was greatly limited: outwards 20° , upwards 10° to 20° , inwards 40° , downwards 30° to 40° . There was not the slightest blurring or haziness of the disc when I first saw it. It was simply paler than the other. It afterwards became white throughout.”

May, 1881.—Right pupil, no direct action; indirect action normal. He sees 20 J. best at the lower part of the field. The rest of field almost absent. *No defect for colours*,² though they all look very dark.

¹ Both nerves have been found torn across behind the optic foramina.—*Post-mortem* by Berlin, loc. cit.

² I tested him carefully and repeatedly with Holmgren's, Stilling's, and Bull's tests.

Ophthalmoscopic examination.—Disc atrophied, yellowish-white; lamina cribrosa exposed; deep physiological cup. Arteries diminished but not extremely; they pulsate on pressure.

CASE 2.—*Complete blindness, with pallor of the disc, after a blow on the eye, probably rupture of the optic nerve, ? damage to the facial nerve on same side.*—Richard C—, æt. 61, farmer, living at Spalding, in Lincolnshire; sent by Dr. Morris.

One month ago he became “dizzy” one evening after dark, and fell, striking his right eye on the hard ground; he was not stunned. The eye was bruised and bled a little. Found he could not see anything with it next morning. It was a good deal swollen, a bad black eye, and has remained blind ever since. During the week or two previous to this fall had had several similar attacks of dizziness but never a fit. The fall was not followed by any weakness of the limbs. Since the fall he has noticed a little twitching of the same side of the face.

July 26th, 1880.—He is in good health, ruddy, spare, strong.

Vision.—Right, blind; pupil, no direct action; acts well indirectly; no action with accommodation; same size as left. Left, $\frac{20}{50}$ H.m. 1 D. $\frac{20}{20} + 4.5 = 1$ J. well at 10''; pupil normal to light, acts slightly to accommodation.

Considerable convergent strabismus, concomitant and constant (old); rather small twitchings of muscles of right side of face (mouth and eyelids and levator palpebræ, but not the orbicularis palpebrarum). The right eye looks a little more prominent than the left.

Ophthalmoscopic examination.—Right optic disc shows yellowish pallor all over, and is rather misty. Arteries considerably diminished, but pulsate easily on pressure. Veins normal or ? too large. No other changes (erect image). Left, normal.

CASE 3. *Rupture of optic nerve.*—Amy H—, æt. 54, married, living at 17, Dacre Street, Westminster.

On March 23rd, 1880, in going down the area steps, she slipped and fell into the area, striking the temple and elbow. Was not stunned or ill. The left eyelids swelled up at once, and afterwards she had “two black eyes.” Half an hour after the accident she found on trying that she could not see firelight with the left eye when the right eye was closed; this

was not because she could not open her eye, for on doing so she could see nothing.

April 5th, 1880.—Remains of extensive ecchymosis of skin of left temple and eyelids, but none of the conjunctiva nor eyeball; no irregularity of bone. Movements normal.

Vision.—Right, vision not noted, but doubtless good. Left, no perception of light; pupil usually $3\frac{1}{2}$ or 4 mm., compared with 3 to $3\frac{1}{2}$ mm. in right. No direct action to light, but acts well with right (indirect action).

8th.—Just the same. Both pupils act quite well to accommodation and convergence.

Ophthalmoscopic examination.—Left, optic disc pale and not quite clear. Veins normal, and arteries pulsate on pressure.

CASE 4. *Recovery from amaurosis after injury to head (vision failing two or three days after injury?); hæmorrhage from nose six days after injury.*—Eliza B—, æt. 50, (Elizabeth Ward, Mr. Sydney Jones). On November 12th, 1881, in the evening, she fell on a kerb-stone and cut her right temple; admitted immediately; was unconscious for four hours. She found vision of right eye defective on the 14th, after closing the eyes for a moment because they ached; believes she could see well with it before. Pupils said to have been equal on the 14th.

15th.—Cannot count fingers with right eye. No note of pupils.

18th.—Some epistaxis, chiefly from left nostril.

19th.—Pain across forehead and eyes. Clots of blood from mouth when she blows nose.

24th.—Right eye, no changes in fundus or media; bare perception to light even when concentrated by lens.

I did not see her again, but the house-surgeon, Mr. Marlow, assured himself by examination that the sight of the eye had improved very markedly when she left the hospital on December 7th.

CASE 5. *Blindness of one eye and paralysis of same sixth nerve after injury to head, with proptosis.*—Alfred W—, æt. 6; admitted under Sir W. McCormac, on August 30th, 1881. Fell out of third floor window; admitted immediately; bleeding from nose, vomiting of blood, and collapse; no bleeding from

ear ; proptosis of left eye with contusion of lids ; no hæmorrhage on inner surface of lids nor under conjunctiva. Right pupil larger than left.

September 17th.—Appears quite blind of left eye ; still some proptosis ; outward movement entirely lost. Pupil considerably larger than right ; no direct action to light, but it acts indirectly to some extent. Examination difficult from restlessness and from mucus about lids, but the condition of pupil is probably accounted for by the amaurosis.

Ophthalmoscopic examination.—Left optic disc normal, or perhaps pale. Right pupil and optic disc normal. Child is dull, but fairly intelligent.

October 14th.—Left optic disc atrophied, yellowish paper-white, quite clear, and margins sharp and regular ; vessels about normal. Pupil, no direct action, moderate but not quite full indirect action ; it is usually rather larger than right. Left external rectus has nearly recovered, but still has slight convergent strabismus of this eye. Right eye, optic disc normal and sees well, pupil normal.

CASE 6. *Atrophy of optic disc after injury to head ; intermittent neuralgia of same fifth nerve for many years previously. Probably rupture of nerve high up, or compression in optic foramen.*—George H—, æt. 27 (Sir W. McCormac, Leopold Ward). Fifteen months ago fell about twenty feet down hold of ship, sustaining a compound fracture of right thigh, and was insensible for a week. There was no external injury to the head, and he appeared to have no cerebral symptoms. The doctor told him that immediately after the accident he vomited some blood. As soon as he was sensible (a week after the accident) he found right eye quite blind, as it is now. Believes there was no redness or ecchymosis about the eye.

Present condition (January 20th, 1881).—Right diverges ; no perception of light in daylight nor to concentrated gaslight. Right pupil, no direct action, indirect action good ; usually rather larger than left (as $3\frac{1}{2}$ to 3) ; action to accommodation indefinite ; it makes a brief contraction and dilates again. Left pupil acts perfectly to light, but not so visibly to accommodation. 2.30 p.m.—Eserine to right pupil. 3.15.—Pupil = 1.5 mm. Two drops of atropia, gr. iv to 3j ; 4 p.m.—Pupil =

6½ mm. 11 a.m. (next day).—Pupil still = 6½ mm. Left, vision $\frac{2}{20}$ and 1 J., p. 6''; H.m. .5 or .75 D.

For ten years liable more or less to attacks of pain in this eye and temple; dates it from ague. The left never affected. They are sometimes quite regular daily, and this usually occurs in tropics. At home, when he has them, they are quite irregular in interval. An attack lasts one to two hours and does not affect vision. No pain elsewhere; no radiation to other branches of fifth. He asks whether a carious first upper molar on *left* side may be the cause of these attacks; it is not tender now, but he cannot eat on it.

Ophthalmoscope.—Left normal. Right, greyish atrophy, with some diminution of arteries, but veins about normal; *refraction* emmetropic or slightly myopic. Optic disc shows large shallow cup occupying greater part of surface, except at nasal side. *Lamina cribrosa* more visible than usual. Pulsation test is difficult to apply, but I think arteries pulsate.

On subsequently comparing this disc with that of a case of ataxy with typical grey discs, the optic disc appeared rather yellowish than greyish.

CASE 7.—Mr. C— (sent to me by Dr. Leeson) fell from his horse, striking his forehead, and was stunned for a few hours. Almost immediately afterwards he found the right eye very defective, and it has remained so, though he thinks the sight varies somewhat on different days. His face was bruised, but he was not ill, and two days after the accident he took a long journey. He has become deaf in the left ear since the fall.

July 24th, 1880.—Vision.—Right, $\frac{1}{20}$ and letters of 20 J. Left, $\frac{1}{12}$; *refraction* slightly hypermetropic.

Right pupil same size as left when both are open; very slight direct action to light, indirect action normal. By the ophthalmoscope the disc is seen to be very pale and slightly hazy, the central vessels of ordinary size, and the arteries pulsating on pressure; some mottled blood in retina near the disc, and near the yellow spot a good deal of bright, white, dotted retinal opacity, exactly as in albuminuric retinitis, but less regularly distributed. Left eye normal in all respects. On trying the right eye for colour-blindness I found (by the wool test) that he confused pink with pale green, and full

bright green with a greenish brown, whilst with the other eye he made no mistakes.

The retinal degeneration here was probably a result of changes set up by extensive hæmorrhage. The hæmorrhage may have been due to a coincident blow upon the eyeball, to rupture of retinal veins compressed by effusion of blood into the optic nerve-sheath, or possibly to passage of blood from the sheath into the eye, though this last would be difficult to understand. The coincidence of retinal hæmorrhages with distension of the nerve-sheath by blood after fracture of skull has been proved post mortem by Gowers (Dr. S. H. Burton)¹; and a similar condition figured by Poncet,² after cerebral hæmorrhage.

CASE 8.—John G—, æt. 59 (under the care of Mr. Croft), fell from a cart on to the top of his head one month before I saw him; he said the eyes were not struck. The left eyelids and eye were much “bloodshot,” but the lids were not swollen.

July 26th and 29th, 1878.—Left eye has bare perception of light; pupil usually rather larger than the right; very slight direct action to strong light, indirect action free. Optic disc decidedly pale, “pallor not very great but quite definite,” as compared with the right; there is neither haze nor swelling. The central vessels are of about normal size; the arteries cannot be seen to pulsate on pressure even by the direct method (perhaps owing to some nuclear haze of the lens), though in the other eye they are easily seen to pulsate.

On testing his optic nerves with galvanism it was found that while two cells gave a distinct flash, on making or breaking the current over the sound (right) eyebrow and orbital rim, six cells were needed when the poles were over the blind (left) eye. Whether this showed that the damaged optic nerve was still able imperfectly to conduct the current to the brain, or whether the stimulus was conveyed through the structures to the healthy (right) retina, may be open to question. As there was some perception of light, and some, however slight, direct action of the pupil to light, the former explanation seems probable.

¹ ‘Medical Ophthalmoscopy,’ 2nd edition, Case 49, p. 337.

² ‘Atlas des Mal. de l’Œil, &c.,’ pl. xxxii.

A CASE OF SPONDYLOLISTHESIS.

By ROBERT CORY, M.D.

CASES of spondylolisthesis are rare, and are therefore worth recording when met with. The following case is one which was admitted into St. Thomas's Hospital under the care of Sir Wm. MacCormac, having been sent as a patient to Mr. Clutton, and it was through their courtesy that I was enabled to obtain the notes of the case.

Harriet P—, æt. 26, residing at Crondall, Hants, was admitted into St. Thomas's Hospital on the 26th of May, 1881. She was married in 1876, and her first child was born dead at full time on the 17th April, 1877. The labour was tedious, but otherwise natural, and no instrumental aid was needed. Her second child was born prematurely, when six and a half months pregnant, on the 13th May, 1878. Dr. T. J. Burroughs, of Crondall, who attended her in this and in her subsequent confinement, has kindly written to inform me that he turned the child in order to deliver her as quickly as possible on account of hæmorrhage produced by placenta prævia, and that he had some difficulty in so doing. From this time to the present she has suffered from a slight dull aching pain in her back, which she called "weakness." Her third confinement took place at full time on the 1st February, 1881. Dr. Burroughs, with the assistance of a friend, turned this child also, and thus with much difficulty

delivered the extremities and trunk, but they were obliged ultimately to perforate the head to effect its delivery. After this, her last confinement, she had phlegmasia dolens of the left leg, and the pain in her back became much worse. Her leg soon got better, but the pain in her back became still worse. As soon as she began to get about she experienced great difficulty in walking. On or about the 12th of May, 1881, she fell down from loss of power in her legs, and after this her legs started much before going to sleep. The loss of power gradually passed off, so that on the 26th of May, the day of her admission to the hospital, she was able to stand and walk a short distance by herself, but so doing caused her much pain.

When admitted to the hospital she complained of much pain in her back and lower abdomen. She could stand and walk a short distance, but was quite unable to stoop to pick up anything. Her general health was good and her temperature was and remained normal. On examining her back, extreme lordosis of the lumbar region of the spine was noticed, and a marked depression just above the sacrum. Pressure over the normal position of the last lumbar vertebra, where the depression was deepest, gave her much pain. On examining the abdomen the projecting bodies of the lumbar vertebræ could be easily felt almost on a level with the pubes, there being just room to press the fingers into the pelvis between the projecting mass and the symphysis.

The woodcut on the opposite page, copied from a photograph taken on the 10th June, 1881, gives a very faithful representation of the appearance of the back and the abdomen.

The external measurements of the pelvis were as follows :

	Ft.	In.
Between the highest points of the iliac crests	0	10 $\frac{1}{2}$
„ anterior superior spines	0	9 $\frac{7}{8}$
„ posterior superior spines	0	2
„ great trochanters	0	11 $\frac{5}{8}$
From the symphysis pubis to the 1st sacral spine	0	6 $\frac{3}{8}$
„ the spine of the 2nd lumbar vertebra to top of the sacrum	0	1 $\frac{1}{8}$
Height of patient	4	9 $\frac{1}{8}$

By vaginal examination the internal conjugate diameter



was ascertained to be less than two inches. The cervix uteri could be felt wedged in between the pubes and the bodies of the projecting vertebræ, allowing it no antero-posterior movement whatever.

During her stay in the hospital she gained much in strength, and with the help of a spinal support which was made for her she was able to get about with little or no pain.

Unfortunately her height had never been previously taken, so that it is impossible to say how much shortening has taken place, but Dr. Burroughs, who has known her for eleven years, thinks she is at least two inches shorter now than when she was married in 1876. Since leaving the hospital up to the present time (May 1882) her health has continued good and menstruation regular. She is able, with the aid of the spinal support, to walk two miles without much discomfort.

There have been two causes assigned for the occurrence of spondylolisthesis;¹ one a developmental one advanced by Lambl, the other a pathological one advanced by Kilian.

Dr. Lambl's views were either (*a*) that in consequence of hydrorachis of the lower part of the spinal column, the inferior articular processes of the last lumbar vertebra, which normally have their articulating surfaces looking forwards and a little outwards, become twisted so that they look more outwards, thereby allowing them to slip between their fellow articulating processes; or (*b*) that in consequence of the development of an incomplete sixth lumbar vertebra (which may or may not occur in combination with a hydrorachis) having a very thin body but a more or less complete arch, the upper lumbar vertebra are thrust forward as by a wedge driven in from behind.

Kilian's views were that either from a scrofulous or tuberculous dyscrasia, a local softening occurred between the last vertebra and the sacrum and in the ligaments, attended or followed by inflammation.

In the case just described, it seems probable that the cause is to be found in the latter of these two views.

If we take a fifth lumbar vertebra and a sacrum and place them in position, and imagine that the intervertebral disk

¹ See Dr. Barnes' paper on the subject, in the 'Obstetrical Transactions,' page 78, vol. vi.

originally existing between them and the *body*, but not the arch of the first *sacral* vertebra, has been removed by disease, we can readily understand how such a condition might give rise to their dislocation; for the fifth lumbar vertebra would become tilted by the falling of its body, and this would occasion its posterior portions, including the inferior articular processes, to be raised; and this might occur to such an extent as to allow of the latter slipping over the articular processes of the sacrum.

Exactly the same condition would arise on the supposition of an incomplete sixth lumbar vertebra existing having a more or less complete arch but scarcely any body.



FÆCAL RETENTION, ESPECIALLY AS IT AFFECTS THE CÆCUM.

BY JOHN HARLEY, M.D. LOND.

CONSTIPATION is often the forerunner of enteric fever, and so far may be regarded as a factor of that disease.

I believe I may go even further and state that constipation is occasionally the sole cause of enteric fever.

Those who regard this disease as specific will not, of course, assent to this proposition, but they are compelled to admit that simple enteritis, more or less general, may be a consequence of constipation, and the question is thus resolved into the identity of simple and so-called specific enteritis. I have long ago¹ admitted, if not proved, the identity, and therefore must needs call attention to this point in the present communication.

There is of course no morbid condition more frequently witnessed than constipation. A retention of the contents of the colon for forty-eight hours is sufficient, in some persons, to render the fæces hard and lumpy; and there are hosts of people who think they pay proper attention to the wants of nature if they unload their bowels once in two or three days. Nor is the number of those who habitually go a week very small. While constipation is the commonest ailment that comes under our notice, how rarely do we seem to trace it to a fatal issue,

¹ "Enteric Fever," 'Reynolds' System of Medicine.'

and to study its effects after death? "seem," I say, for I am convinced that many a fatal attack of enteric fever has its origin in constipation.

Nor is death from simple idiopathic constipation a very common event. I can myself adduce two instances from my own practice, and show from a number of others how soon matters assume a grave aspect when the bowels are allowed to become slowly impacted with fæces.

In order to trace the effects, both local and constitutional, of constipation, I will briefly give the history of three cases which will serve to illustrate the condition.

CASE 1 is that of an elderly lady who had resided for many years in India; she came under my care during the last thirteen years of her life, and died at the age of seventy-nine of an attack of constipation. Throughout life she was satisfied if her bowels acted twice or thrice a week, but when away from home, or if there was the slightest risk of her privacy being disturbed, she would allow a week or longer to elapse before she got relief of her bowels. She led an active life, walking a good portion of each day, and as often as she felt bilious took a colocynth pill and so got what she regarded as sufficient relief. As she grew older and less capable of exercise, the bilious attacks became more frequent and violent, and then it was that my aid was sought, and I learned from her maid the real state of affairs, namely, that her mistress usually went to the closet only once a week, that her motions were always scybalous, and that when matters came to a climax and strong purgatives were used, a vast quantity of lumpy fæces were discharged. "Do, sir, get mistress to pay more attention to her bowels, for these attacks make her dreadfully ill; and I am sure she will do herself harm by neglecting herself in the way she does," was an appeal which her intelligent maid made to me more than once. The patient herself, however, thought but lightly of the matter. She as good as told me that once a week was often enough to attend to such a disagreeable duty; and when I suggested the occasional use of an enema; "Don't mention such a thing again," she said, "I would rather die than use it. Give me any medicine excepting castor you like, and I will take it."

Such was my patient. Whenever a repetition of the usual pill failed to remove the obstruction, she was attacked with bilious vomiting, and from the quantity discharged it was evident that the amount of unused bile retained was somewhat commensurate with that of the retained fæces. The vomiting of bile usually continued uncontrolled for twenty-four hours, and was, of course, attended with great prostration. The usual remedies were five to ten grains of calomel with half a grain of opium, and an effervescing draught of citrate of soda and hydrocyanic acid, at intervals. A little iced brandy and water was the only sustenance that could be retained, and this was as often rejected as not. As soon as the bowels were relieved the attack subsided.

The attacks recurred pretty regularly at intervals of three or six months, and on one occasion calomel, and subsequently a large dose of compound colocynth pill, failing to open the bowels, I said "My only safe resource is the enema." I explained its simple, direct action, and the danger of forcing a passage from above. She shook her head, smiled, and said, "Give me a good dose of Croton oil, that I know will be effectual." I was obliged to yield, and fortunately the result was satisfactory.

I now provided the maid with an india-rubber enema apparatus, showed her the use of it, and urged her to get her mistress to use it. But the lady's conservatism and abhorrence of everything that savoured of French customs got the better of her own sound judgment and of our entreaties; and it was only in her last attack, and a few hours before her death, that I disregarded her scruples, and for the first time washed a few large scybala coated with fluffy mucus from the rectum. But this time the vomiting caused rapid prostration, and she was "*in extremis*" and died unrelieved of her constipation about ten hours after the commencement of the attack.

CASE 2 will serve to illustrate a passive variety of the same condition. The subject was an old servant of my own, a little spare woman, nearly seventy years of age. I was once asked to see her, and found her in bed, prostrate, with a dry brown tongue and a pulse of 80. She could give me no

further account of herself than that she had completely lost her appetite, and was too weak to go about her work. She looked, indeed, as if she were going to have typhus fever, but the skin was cool and free from rash. On examining the thin abdomen I could distinctly feel nodular fæces, and then I discovered that she was habitually constipated, and that the bowels had not acted for seven or eight days. A clyster of soap and water followed by a dose of castor oil brought away a large quantity of scybalous matter, and she was well again in the course of a few days, but continued weak for several more. During the time she was in my service she had three such attacks, exactly similar, the dry brown tongue being very characteristic. I prescribed an aperient pill, giving her warning not to neglect the action of the bowels, and she has followed my directions and experienced no more attacks. She is still living near the age of eighty.

These two cases illustrate the difference in the symptoms which attend the same condition in different individuals. The one (Case 1) was an excitable, highly emotional person; the other was of a placid disposition, and had no tendency to vomiting.

Such an individual it appears was the subject of Case 3, who actually died of constipation without any indication of obstruction.

CASE 3. *Fatal constipation without prominent symptoms.*—Charles C—, æt. 17, was admitted moribund into the London Fever Hospital, 13th November, 1866. No history could be obtained of him, except that he had been very weak and “out of sorts.” His body was spare almost to emaciation, the skin supple, free from rash, and cold, the hands and feet dusky, the eyes sunken, the pulse thready, the tongue moist and dirty; the abdomen was not enlarged, and it had a doughy, inelastic feel. He was free from pain or distress—apathetic, indeed—and took drinks with difficulty. He did not rally, and died next day.

After death.—The small intestine was found void of fæcal matter, the mucous membrane everywhere injected and covered over with a layer of purulent-looking mucus, the sur-

face beneath was red, vascular, bare, and in patches considerably inflamed. The whole of the large intestine, from the opening of the vermiform appendix to within two inches of the anus, was impacted with fæces; in the colon formed into tripartite masses, each lying in a separate cell, and only attached to the mass above and below at the centre, where it was three quarters of an inch thick. The colon was contracted on these scybala so as to have a very regular nodular appearance. The cæcum was filled with one large mass of very stiff, dark-greenish fæces, weighing about a pound. On raising the scybala from the mucous surface, this was found to be vascular and covered over with a thick layer of yellow opaque mucus, and at some parts, in the cæcum especially, the mucous membrane was much inflamed. All the other viscera were healthy.

Here is a case in which constipation set in gradually, attained its fullest development, was, as far as could be ascertained, wholly uninterfered with, and was thus allowed to run its fatal course. Let us consider the effects, both local and general, which are consequent upon such a condition.

The earliest effect of constipation is the absorption of moisture, and the conversion of the soft fæces into lumps or nodules. A considerable amount of mucus is secreted and incorporated with the fæces as a normal process, and it would appear that there is no diminution of the amount of mucus thrown out when the fæces are retained, for one of the most obvious effects of constipation is the formation of a thick layer of opaque mucus upon the surface of the scybala, filling up the interstices between the nodules, and when placed in water seen as a thick fluffy coating. Such a layer of mucus no doubt acts as a protective covering, and at the same time, by obstructing osmosis, prevents the absorption of fæcal matter. But retained mucus is itself liable to putrescent change. Ozæna, for example, is commonly produced by the decomposition of retained mucus; it becomes opaque and purulent, and then very soon disorder arises in the germinating layer, the blood-vessels become congested, growth ceases, the mucous membrane softens, and the unhealthy surface easily bleeds and soon presents patches of erosion. If this state of unhealthy congestion of the mucous membrane be not relieved by the expulsion of

the unhealthy contents of the bowel, irritation and pain sooner or later ensue, as the immediate forerunners of inflammatory action. It is but reasonable to expect that lymphatic irritation would arise very soon in such a condition as this, and thus the solitary and agminated glands would be involved, when the symptoms would be indistinguishable from those of developed enteric fever. I could adduce several instances of this transition, but I will content myself with the following case, which will easily be recognised as a link in the chain :

CASE 4. *Fæcal accumulation in the cæcum inducing some of the symptoms of enteric fever.*—James R—, æt. 40, a large, rather fat man, a policeman, was admitted into the London Fever Hospital, 8th June, 1871, on the fourteenth day of his illness. He gave the following account of himself:—The day before his illness commenced he accommodated a colleague, who had just left the Fever Hospital convalescent from an attack of relapsing fever, with a bed, and was disgusted by a bad smell arising from his clothes. Next day, when on duty, he felt an icy chilliness and pain in the legs. On the second day he had pain in the abdomen, and he applied to a medical man who gave him pills “to work it off.” The pills acted, and he continued on duty until the ninth day, and then took to his bed, where he remained until the day (fourteenth of the illness) of his admission. At this time there had been no action of the bowels for ten or eleven days. The mind was clear, tongue moist with an even coating of white fur, the skin coldish and free from rash, pulse 100 and weak. There were pain, tenderness, and fulness in the right iliac fossa ; the rest of the abdomen was rather doughy to the feel. There was anorexia, but he took fluids. Hot fomentations were applied and stimulants administered. Excepting a pain in the right gluteal region, extending to the knee, and very free perspiration with beads of sweat on the forehead, he continued in the same state.

On the sixteenth day half an ounce of castor oil was given ; it acted once moderately. On the eighteenth day the pulse was 120, the temperature only slightly elevated, the skin free from rash and still perspiring, the tongue still moist with a dirty-white fur. A simple enema produced two loose stools, the first containing scybala. The next day (nineteenth) a

defined, hard, tender tumour, in which the patient experienced some throbbing, could be felt in the cæcal region, the fulness and solid feeling passing upwards to the hepatic region. A light loose stool was discharged spontaneously to-day. He was now ordered daily enemata of castor oil and the continued application of linseed and mustard poultices to the right iliac region. The first enema produced a loose yellow stool with a few hard scybala as big as filberts.

On the twentieth day the throbbing had ceased, the abdomen was less full, and now the tumour in the cæcal region was appreciable to the eye, lying in the iliac region; it was firm and not very tender, and reached, on the left side to within two inches of the mesial line upwards; to the hepatic region, and downwards two inches below the level of the anterior superior spine of the ileum. The breath had a disagreeable sweet odour.

During the next two days there were eight or nine loose stools—a very copious relief. These evacuations consisted of disintegrated fæces, being thin and yellow without scybala.

On the twenty-second day a great diminution of the fæcal tumour was noticed, and manipulation gave very little pain.

On the twenty-third day there was a marked improvement in the general condition, and the tumour was no more perceptible than the sigmoid flexure before a natural evacuation. The tongue was still covered with a thick white fur, the skin was cool and occasionally perspiring very freely; the patient was comfortable but feeling weak.

During the next few days the enemata continued to bring away large quantities of fæcal matter, and this part of the treatment was now finally omitted.

On the twenty-eighth and thirtieth days a very copious semisolid stool was discharged each day, the tongue began to clean, and the appetite to reappear. Fish was allowed, but it appeared to provoke diarrhœa and was discontinued next day. Perspiration was still profuse, the abdomen retracted, and the cæcal tumour quite gone. The bowels continued loose for the next seven days, two or three stools in the twenty-four hours, the motions being watery and light yellow.

This outbreak of diarrhœa was preceded by the appearance of a few rose spots upon the trunk on the thirty-second day.

At the end of a week the motions acquired a natural consistence, and there was no further development of rash after the thirty-second day. Perspiration still continued profuse at times, and the pulse declined to 84. The patient was very weak, and there was considerable emaciation. It was the forty-seventh day before the appetite returned and he was able to take solid food. He regained his strength slowly, and was discharged on the sixty-fourth day.

In this history we see some things which resemble enteric fever and some that do not. As resemblances I may point to:—1. The onset—disgust of a bad odour. 2. The long continuance of the symptoms (two months and more), and the prostration and emaciation attending them. 3. The development of a rose rash.

The differences appear at first sight even more positive: 1. There is a large fæcal accumulation with constipation. 2. An absence of fever, the temperature never rising beyond 99°, except on the day after his admission when it was 101°. 3. A moist skin frequently bathed in sensible and distressing perspiration. 4. A continuously moist tongue. 5, and lastly, the need of a purgative treatment.

Those who are fond of classification—artificial distinctions, I would rather call it—will perhaps be quite satisfied that the case I have narrated in brief above is not one of enteric fever. But when we come to analyse these resemblances and differences we find that they have no real worth. Thus a squeamish stomach is surely to be expected when the bowels are blocked and the appetite gone. Prostration with emaciation is an invariable attendant on enteric fever, and must be regarded as the direct result of arrest of nutrition. But such arrest of nutrition would equally happen in a case of grave constipation such as the present or Case 3, which is even more to the point.

A successive crop of rose papules appearing daily for three or four days occurs in considerably less than half the cases of enteric fever, and it must be granted that in many cases the rash when present does not amount to more than was noted in the case recorded above. For my part I cannot regard this as very important evidence of the existence of enteric

fever, but I would say of this symptom as of the rest, "*valeat quantum valet.*"

As to the differences. A reference to the history of the case will show that constipation persisted, or that enemata and purgatives were required, up to the thirty-second day; then a few rose spots appeared, and the bowels became loose—two or three light yellow stools in the twenty-four hours—and continued so for a week. But constipation—I will not say to the extent of a large palpable faecal mass—is a very common event in enteric fever. Indeed, if I look back to the cases which have occurred in my practice during the last three or four years, I find several cases in which enemata have been required throughout the attack, and in the majority they have been needed in the early as well as in the convalescent stage of the disease. Constipation, therefore, affords no distinction. In the case narrated the pain produced by pressure of the lumbar plexus is significant of the amount of the accumulation.

Perspiration, excepting as a crisis, is certainly not common in enteric fever; but to mention only one instance, I have this winter treated a severe case in Arthur Ward in which frequent and severe sweats were for three weeks a distressing symptom.

The only real distinction which remains is in respect of the temperature. Normal temperatures have indeed been noticed in attacks of enteric fever, but like continuous perspiration they are the exception.

Thus between two groups of symptoms, the one produced by faecal accumulation and obstruction and the other by the cause of enteric fever, we fail to find any essential distinction.

The connection between the two morbid conditions may be shown to be still closer. In the case of constipation while the cæcum was full there was anorexia. As soon as the obstruction was removed the appetite returned, but the fish that was then taken provoked diarrhœa. The mucous membrane was still thin, bare, irritable, congested, not to say excoriated, and ready to resent any annoyance.

If the faecal matter had been allowed to remain undisturbed in the intestine for some days longer, severe febrile symptoms would no doubt have been developed, and then probably the case would have been regarded by all who saw it as one of enteric fever.

I pass now to make a few remarks *on the treatment of fæcal retention involving the cæcum*. The subjects of it are numerous. The condition itself is very often regarded as typhlitis and perityphlitis.

I have at the present time two patients in St. Thomas's suffering from this affection, and a brief account of these will serve to illustrate the treatment.

In these, which may be taken as typical cases, the accumulation in the cæcum was but a part of the general constipation. The first object of treatment was to unload the colon by the use of saponaceous and oleaginous enemata, given at intervals of six or twelve hours according to urgency. After the evacuation of a fair amount of fæcal matter has been thus elicited, I give half an ounce of castor oil with two teaspoonfuls of brandy, and eight or ten minims of tincture of opium, and repeat the dose after every evacuation produced by the enemata. By these means we may succeed in producing two or three fæcal motions in the twenty-four hours to the great relief of the patient. The fæcal tumour will be found to decrease and become less tender from day to day, and in cases of ordinary severity the cæcum will be emptied in the course of a week, and the patient restored to convalescence. Where there is much pain, a hot linseed and mustard poultice should be kept applied to the abdomen.

The subsequent treatment should be that of enteric fever, and for a week at least after all pain and febrile disturbance have ceased, no solid food should be given.

If the case have been a severe one and the symptoms of long continuance, as in No. 4, there is commonly a tendency to reaccumulation in the cæcum. To avoid this, an occasional dose of castor oil should be given, a compress worn with a flannel bandage over the region of the cæcum, and frictions occasionally used over the part; strychnia in some tonic infusion may be given to promote tone in the weakened intestinal wall.

Inveterate paralysis of the large intestine sometimes follows an attack of constipation, the colon becomes distended with air to an enormous size, its flexions can be traced by the eye, and there is much difficulty in securing the evacuations, which are formed into clay-like balls often as large as

the patient's fist. Two such cases have come under my notice.

But to return to the ordinary cases :

CASE 5. *Gradual constipation followed by the sudden appearance of symptoms of obstruction in the cæcum.*—Louisa B—, æt. 19, a stout, healthy domestic servant, was admitted into Christian Ward, 18th March, 1882. She had never had illness until eight days before, when she was taken with vomiting and pain in the right side of the abdomen; there was complete anorexia, frequent chilly sensations followed by heat. These symptoms, including the vomiting of green bilious fluid, continued up to the time of admission. The bowels she said had acted regularly up to the first day of her illness, and she was obliged to take to her bed on the fifth day.

On admission on the eighth day the cheeks were flushed, temp. 102.2° , pulse 104, tongue coated with white fur, red at edges, inclined to become dry, much pain and tenderness in the right iliac fossa, and resistance of the rectus. The bowels had not acted for a week.

A simple enema brought away a very copious natural evacuation. A grain of opium was given by the mouth and a linseed and mustard poultice applied to the abdomen.

Ninth day.—A diaphoretic mixture, every four hours, and five grains of Dover's powder with two grains of mercury and chalk, night and morning, were prescribed.

Tenth day.—Improved, temperature declined to 100° , pulse 84, pain and tenderness much less, and she bore palpation fairly well. A well defined solid rounded tumour was felt lying in the iliac fossa and extending vertically to the liver and towards the left to about two inches from the mesial line. A simple enema was now given every day and followed by half an ounce of castor oil with eight minims of tincture of opium, and continued until the seventeenth day, when the bowels acted spontaneously and freely this and the following day.

On the nineteenth day another dose of oil and laudanum was given; two days afterwards the previous medicines were omitted and quinine mixture prescribed.

On the twenty-third day she was convalescent and left her bed.

On admission the patient had the aspect and general symptoms of enteric fever, but the accumulation in the cæcum was evident. Her statement that the bowels had been acting regularly up to the time of her admission was no doubt correct, for a gradual accumulation of fæces in the cæcum is quite consistent with a daily action of the bowels. Young people are not usually particular in ascertaining the quality and amount of their evacuations, and if they have a movement of the bowels every day they regard that as satisfactory whether large or small.

As to the progress of the case, this was uniformly satisfactory, the temperature declined and was normal after the sixteenth day. The evacuations were copious and consisted of normal broken down fæces without scybala. The cæcum was still full and tender on the fourteenth day. On the sixteenth day tenderness was absent, and on the eighteenth day it was wholly relieved of its contents, and felt like a movable cord beneath the now lax abdominal wall. Desire for food returned on the sixteenth day, and she was allowed fish on the seventeenth day, and left her bed on the twenty-third day.

CASE 6. Constipation, acute pain in the right iliac region, and vomiting after a hearty meal of whelks; fæcal tumour of the cæcum; convalescence after twelve days.—Henry B—, æt. 25, a strong, healthy, well-nourished man. He never had any illness like the present, and admitted that he had paid little attention to the action of his bowels.

On the 18th of March he ate heartily of whelks, and some hours afterwards was suddenly taken with severe pain in the abdomen and vomiting of a green fluid. He was admitted into Arthur Ward early next morning. The temperature was 101.4° , he lay on his back with the legs drawn up, and had much pain and tenderness in the right iliac fossa, which appeared a little fuller than the left. The rectus was very resistant, and the part was too painful to bear handling. The bowels had not been open for several days. Hot poultices were applied, simple enemata given every three hours, and a grain of opium by the mouth. In the afternoon the temperature rose to 102.2° . Four or five dark fluid motions without scybala were elicited by the enemata. In

the evening half an ounce of castor oil with eight minims of tincture of opium was given by the mouth. Bilious vomiting however recurred, and as this dose was probably rejected, another was given, which was followed in the course of a few hours by a very copious evacuation of a somewhat pasty consistence and dark yellowish-green colour.

Third day.—There was a little relief of the abdominal symptoms, but he still lay on the back with the legs drawn up; the loaded cæcum, still very tender, could now be distinguished; temperature 101° , pulse 100, tongue moist, with a thin white fur. A simple enema, followed by a dose of castor oil (℥ss) and laudanum (℥viiij), was given daily for the next week. The evacuations were free, composed of light yellow disintegrated fæces with a few hard lumps the size of nuts.

On the sixth day the cæcum was much less tender, it was still full, and distinctly nodular to the feel. After this date the improvement was rapid, and by the twelfth day the accumulation was completely removed, the bowel could be handled freely, and it was contracted to a soft rope-like band. Between the third and ninth days the temperature was usually about 1° above normal, being 100° on only one occasion. Afterwards it declined and remained normal.

He was allowed fish on fourteenth day. Convalescence was uninterrupted, and he left the hospital on the 21st day.

In this case there was pre-existing constipation, and the ingestion of a hearty meal of indigestible food developed the symptoms of the latent obstruction by causing the descent of more fæcal matter into the cæcum when already over-charged. The symptoms arose soon after a meal, the usual provocative of peristaltic action in the digestive tube.

So far I have only spoken of constipation as it affects the mucous membrane, and I exclude the foregoing cases from the condition which is commonly designated typhlitis.

Inflammation of the whole of the coats of the cæcum must result as a matter of course whenever retention remains long unrelieved. To make my paper more complete I will therefore add two more cases, one in which incipient inflammation probably involved the cæcum, and another in which inflammation passed into ulceration and perforation.

CASE 7. *General constipation; retention of fæcal matter in the cæcum, fever, local pain and constipation.*—Eliza S—, æt. 19, a healthy, well-developed girl, had been poorly, and attending Queen Charlotte's Dispensary for headache for some weeks. The bowels had been acting every other day, and she was doing her ordinary work, when on 17th September, 1871 (first day of her illness), she was taken with a sudden pain in the right side of the abdomen with vomiting. The symptoms continuing, she was admitted into the London Fever Hospital, Sept. 21st. When I saw her the bowels had not acted for eight days. She complained of much pain in the iliac and lumbar regions of the right side, the cæcal region was full and very tender, and occupied by a smooth rounded mass lying between the anterior superior spine of the ileum and the costal arch. Pulse 120, temperature 104°. The skin injected and dry, the cheeks flushed, tongue moist, furred with red edges. A few hard nodules (scybala) could be felt in the left iliac region. A simple enema, and half an ounce of castor oil by mouth were given immediately, and these were followed in the course of a few hours by two very large motions, composed in part of healthy soft fæcal matter and in part of rounded scybala the size of walnuts, and of the consistence of moderately soft cheese. Hot fomentations were applied. This was followed by relief of pain and sickness.

On the eighth day of the illness (the eleventh since the primary constipation) an enema of castor oil and turpentine (of each an ounce) was given. This returned without effect.

Twelfth day.—Pulse 106, temperature 102°, tongue as before moist, the dorsum with a thick dirty yellow fur, the margin red; the abdomen a little full, everywhere soft, resonant, free from tenderness, excepting on the right side, which is still occupied by a vertical tumour, whose rounded border lies two and a half inches to the right of the median line. She could not bear the slightest pressure. Six leeches were applied over the cæcum, and half an ounce of castor oil given by mouth. The bowels were freely relieved of much firm, healthy fæcal matter, and were subsequently loose for twenty-four hours. Next day the tumour was considerably less and the general condition improved.

On the fifteenth day the flush was gone, pulse 72, temperature normal, abdominal fulness and local tenderness also gone, and the belly was now soft and flat. Only a little thickening could be felt in the place of the former tumour. No action of the bowels for two days. Tongue clean and wet, rather purplish; the appetite returned, and in the course of a few days she was able to leave her bed. The subsequent treatment consisted of an occasional small dose of castor oil and a simple enema.

CASE 8. *Constipation, followed by fever and stercoraceous vomiting: perforation of the cæcum and stomach.*—Richard H—, æt. 43, well nourished, had been ill thirteen days before admission into the London Fever Hospital with constipation, anorexia, and latterly, continued fever. I first saw him on 12th April, 1870, on the fourteenth day of his illness; the pulse was 100, temp. $99\cdot6^{\circ}$, tongue whitish and moist, the bowels open, and he was hungry. Very little change was experienced until the eighteenth day, when he had a slight rigor with loss of appetite. On the twenty-second and twenty-third days the bowels were loose, the motions pale and watery, and there was profuse perspiration, the skin being cool, and the pulse as yet had exceeded 116 on one day only, now it was 106. A little sordes still remained on the teeth.

On the twenty-fifth day, the abdomen became tense and tympanitic. There was no tenderness on making slight pressure, but he has suffered a good deal of pain in the epigastrium; tongue dry and wrinkled, the cutaneous veins of the abdomen large, the pulse 100.

On the twenty-sixth day the abdomen was less tense, and there were two abundant watery stools during the night, of the colour of burnt umber; the breath had a distinct pyæmic odour; the patient was apathetic and apparently comfortable. He continued in the same state, and on the twenty-ninth day he vomited for the first time about twelve ounces of brown bilious fluid. Next morning about an ounce and a half of grumous fluid, resembling pea-soup, was rejected. In the afternoon of this day the vomit had a distinctly stercoraceous odour, and consisted of pale, ochre-coloured, opaque matter, floating on and marbling a light yellowish-brown mucous

fluid. The bowels acted at intervals, the motions having the characters last described. The abdomen was smaller and softer, the veins less distinct, and free from pain and tenderness. The prostration, however, was increased.

On the thirty-first day he lay in a half-recumbent position, sunken, cold, clammy and apathetic with a strong post-mortem odour of the breath. He vomited frequently, rejecting in all as much as four quarts of bright gamboge-coloured matter of the consistence of thick gruel, and with a powerful fæcal odour; a similar fluid ran from the rectum every few minutes. The next day the symptoms were unchanged, save that the abdomen had become soft and doughy to the feel, with a central area of dull percussion; the previously thready radial pulse was now imperceptible, and he died tranquilly, retaining consciousness to the last.

After death.—The abdomen was retracted and dusky, the recti and other muscles of the abdominal wall almost black. The median incision below opened a sac corresponding to, and coextensive with, the pelvic cavity; it extended three inches upward from the symphysis pubis, and extended laterally from one iliac crest to the other; it was limited above by a straight wall formed by the coherent coils of the small intestine; below, by the bladder, which contained half a pint of urine; behind, by the sacrum and rectum; in front, by the abdominal wall. A strong membrane, apparently of not recent formation, was reflected from the edge of the adherent coils of the intestine to the peritoneal covering of the hypogastric region.

The sac was everywhere closed except where it communicated with the cæcum; its inner surface was covered with a granular villous growth of a light brown colour, stained, indeed, by the contents of the sac, its large cavity being full of bright yellow grumous fluid, a little thicker than that which had been vomited but otherwise exactly resembling it. The cæcum and ascending colon, which formed the boundary of the sac on the extreme right, presented four rounded perforations, the lowest at the bottom of the cæcum by the side of the vermiform appendix, the second just above, the third (which was the largest, and about three quarters of an inch wide) two inches higher up, and the fourth an inch and a half above this. These openings into the sac had thick,

almost villous lips, as if formed of everted mucous membrane. The coils of intestine were flaccid, of a leaden hue, and adherent by organised membrane. The opening of the vermiform appendix was small and healthy, and the organ itself lay compressed against the walls of the fæcal sac. The colon, sigmoid flexure and rectum were quite healthy and empty; neither the jejunum nor the ileum showed any signs of ulceration, but were full of fluid like that in the sac. On dissecting out the adherent coils of the intestines numerous small isolated abscesses were discovered here and there.

A second fæcal sac, apparently quite distinct from the former, and only communicating with it through the bowel, lay deep in the right hypochondrium between the abdominal wall and matted coil of intestine, and limited above by the gall bladder and the under surface of the liver. The contents were identical with those of the largest sac. On opening the stomach the mucous membrane showed patches of slight congestion; in the posterior wall was a round aperture, with smooth edges, nearly large enough to admit the tip of the index finger; it communicated with an enlarging passage, which seemed to end in a *cul-de-sac* above the head of the pancreas, but which probably communicated with the sac of the small omentum, in which there was also a collection of fæculent fluid.

Excepting the stomach complication and its results, an almost identical case was admitted under my care very soon afterwards, and this was equally unsatisfactory in reference to the previous history. In neither case could I assign the date of perforation with any degree of certainty, but my impression was that it had occurred in both cases before admission. The perforation of the stomach in the case narrated here, appeared to have happened subsequently to those of the cæcum—on the 25th day? This was probably the cause of the vomiting, for the fæcal sac, into which the pelvic cavity was converted, formed a diverticulum to the cæcum, and communicated so freely with it that there did not seem the least liability to obstruction.

ON MEASUREMENT IN THE MEDICAL APPLICATION OF ELECTRICITY.¹

By W. H. STONE, F.R.C.P., &c.,

AND

WALTER KILNER, M.D.

DR. STONE commenced by stating that the subject had been suggested by Lieut-Col. Webber, the chairman, and that the details the authors proposed to give that evening were mainly preliminary to fuller treatment, which they hoped to offer at some future period.

Medical electricity, he said, had been up to now a heterogeneous mixture of loose statements, doubtful diagnosis, and erroneous therapeutics. Glaring instances of these were given. With hysteria, Metallotherapy, and magnetic appliances, they did not propose to deal: science is in far too elementary a state to see through these obscure, though real phenomena. Probably, the key to the great enigma of the connection between electricity and nerve-force had yet to be found. The bold statement that "electricity is life" is demonstrably false in many particulars. Speaking generally, medical electricity had suffered from its exclusive handling by physiologists and

¹ Read before the Society of Telegraph Engineers and Electricians on Thursday, March 9th, 1882.

physicians, who might receive valuable help from physicists; indeed, the writers of the paper were actually soliciting such assistance at the hands of this young and active society. Medicine and its kindred arts lend themselves ill to measurement: the tone of mind required for their practice is rather judicial than computative; it is oftener concerned with weighing evidence and balancing alternatives than with solving equations. But men who work by measurement are usually sterling and accurate men; indeed, Prof. Schuster has recently shown how mathematics can help science. Where measurement *can* be used, it *should* be used; and this was their text for the evening.

The speaker then proceeded to divide the forms in which electricity had been used medically into four, namely:—(1) continuous currents, (2) continuous currents made to intermit, (3) induced currents, termed generally “Faradisation,” (4) statical electricity. The last of these was the first employed, but it had given the least satisfactory results of any. The third method had been far the most deeply studied. Duchenne’s great work on ‘Localised Electrification’ early drew attention to this department. That genuine and indefatigable observer was able to point out so many definite diagnoses, and to isolate so many new nervous and muscular diseases by means of the induction-coil, that this instrument had been given somewhat excessive prominence as a therapeutic agent. Physiologists had also found in it a convenient stimulant for testing the action of nerves and the irritability of muscle; perhaps also the localisation of brain-functions. Hence muscular contraction and the action of intermittent currents in alternate directions had been too much relied on as evidence of activity. One chief object of the paper was to point out that the future of electro-therapeutics lies more in the continuous current, used either in its first or second form, the latter of which has hitherto received little or no attention. In confirmation of these views, extracts were read from Prof. Erb’s valuable memoirs in ‘Ziemssen’s Cyclopædia of Medicine.’

Before, however, a single step could be taken in this scientific path, we must have some tolerably accurate mode of measuring the agent we are employing. It is obvious that

the units used should be as far as possible those generally adopted in the scientific world.

To begin with Resistance: This in the human body is singularly great, and is especially located in the epidermis, which, when dry, is an excellent insulator. Wetting it with sulphate of zinc or common salt in solution diminishes this resistance very materially; though even when care is taken in this respect the residual opposition to a current is large. From hand to hand it is usually about 6000 ohms. In the larger bulk of the trunk, from the sacrum to the nape of the neck, it never, even after long wetting, sinks much under 1500 ohms. That of the head, from nape to forehead, is about 2000 ohms. In one case it was more precisely 1930 ohms, in an adult, and in another, a child, 2500 ohms. The resistance of different tissues, though not exactly to the present purpose, had been studied by Prof. Eckhard, who stated that muscle was the best conductor, and that this being taken as a unit, cartilage would have a resistance twice, tendons and nerves about 2.1, and bone nineteen times as great. Matteucci states that muscles conduct four times as well as nerves, brain, or spinal cord. The resistance of the skin varies from day to day, being modified by moisture, and by the fulness of the capillary vessels. In a particular case the positive pole of a battery was placed on the sacrum of a child, and the other on the leg, over the extensors of the foot. By using the same current, and adding quickly a known resistance, the resistance of the body was at first found to be 11,250 ohms, which, on thoroughly soaking the skin, was reduced 2875 ohms. Three days previously the resistance before soaking was 13,000 ohms, and after that process sank to 3000 ohms. Personal idiosyncrasy exercising an influence, a delicate skin conducting better than one which is coarse. The face and neck offer the least, the soles and palms the greater, resistance. Disease causes variation of conductivity: the skin over affected muscles in lead paralysis has its resistance increased, while in many old cases of hemiplegia it is decreased to a greater or less extent according to the amount of atrophy which has taken place.

The resistance of muscle in disease is sometimes diminished, sometimes augmented. Augmentation takes place, at the

commencement of degenerative changes, from the inferior conductive power of fat to that of healthy muscle. In a case of infantile paralysis, the sound leg had a resistance of 2500 ohms, the affected leg of 3250 ohms. In a wasted muscle of many years' standing, the enormous resistance of 16,500 ohms was reached. It was both easy and desirable to multiply facts such as these.

The second preliminary point was the current which could be borne with impunity. Here results were very discordant. In the three fatal cases from touching the conductors of dynamo-machines, at a music-hall, in the Russian Navy, and at Hatfield, the necessary facts for measurement were absent ; although Dr. Siemens had stated that he had often taken a current sufficient to produce a powerful light with impunity. In a case now in St. Thomas's Hospital, a current of 50 milliwebers was borne with difficulty, and one of 20 milliwebers with ease and great benefit. A case of diabetes, recorded by Dr. Stone in the 'Proceedings of the British Association at York' in 1881, took about 10,000 micro-ampères, or 10 milliwebers, through his head, from nape to forehead, after some practice, using for its production from 15 to 20 cells of a bichromate battery. The particular battery, however, mattered very little ; Leclanché's, bichromates and zinc-carbons with sulphate of mercury, all act well, and need not be of large size or small resistance. One was shown, in which test-tubes filled with mercuric sulphate, containing free acid, formed the jars ; another in which a rod of zinc of $\frac{5}{16}$ " diameter, and a similar sized carbon, such as is used in electric lamps, were immersed in the bichromate solution. Connection was here made with the carbon by a piece of drawn tube sprung on to it, thus doing away with the use of clamps. All these, as well as most of the apparatus shown, were made in Dr. Stone's workshop, chiefly with his own hands.

In consequence of the high resistance of the skin, it was essential to give a large size to the poles employed for applying the current, &c. Amalgamated zinc, with the mixture of potter's clay kneaded with a solution of common salt, used in physiological experiments, laid over it, was perhaps, theoretically, the best ; but powdered carbon placed in a bag and immersed in salt and water, answered equally well ; or

the surgical appliance termed Spongio-piline, a thick felt, backed by india rubber, through which a well-tinned copper wire was threaded, so as to encompass its whole circumference without anywhere projecting so as to touch the cuticle. The poles could hardly be too large.

A convenient form of Thomson galvanometer with graduated shunts, due to Dr. Kilner, was shown, and also a simple but effective instrument for producing intermissions in the current at any required interval of time. This apparatus consisted of a metronome with contact-pieces dipping into mercury cups at each oscillation, a condenser being placed under the instrument to get rid of the extra current, and so to equalise the physiological effects of the making and breaking currents.

The measurement of induced currents presented considerable difficulties. The Conference at Paris had recommended the use of standard induction-coils, but this method does not give any but arbitrary measures. Dr. Stone had tried and showed a vacuum-tube, in which the tension of air could be varied by combining it with a barometric-column and a movable cistern. This gave a ready means of varying the force of the discharge, by using it as a shunt of variable resistance, and had the interesting results of shunting the "make-current" at a definite point, while allowing the "break-current," which is about six times stronger, to pass between the platinum points; thus obtaining an induced current in one direction only. Latterly he had adopted also condensers of definite capacity charged to definite potentials. The writers were, however, still experimenting with another method, depending on Sir W. Thomson's determinations of spark-length. The most practical method, at present, seemed to be to pass a continuous current of measured strength through an automatic commutator, which at alternate oscillations diverted it in one and the other direction. If there was any real physiological value in rapid reversals of direction, as was claimed by some experimenters, it could thus be secured, without the use of an induction-coil. Another form of rotating-commutator was also shown, in which an ebonite cylinder, pressed on by six springs, at each quarter-turn connected, first, the condenser to the battery, so as to charge it, and then discharged it through the patient. To obviate the necessity

of employing a large battery with the condenser arrangements Planté's secondary battery could be charged in parallel position from a small number of Grove's cells, and discharged through the condenser in series. In all these contrivances, however, as the current gained in tension, it seemed to lose somewhat in chemical and catalytic power, and to assimilate gradually to the static form.

In the discussion which followed Mr. Preece pointed out that the use of electricity for curative purposes had been advocated as long ago as the year 1759, by John Wesley, and recommended the use of the dynamometer¹ for the measurement of induced currents, as this instrument gave indications in the same direction with all currents. Prof. McLeod, Mr. Fitzgerald, and Prof. Ayrton also made comments on the paper.

¹ The instrument, suggested by Mr. Preece, has since been successfully constructed by Dr. Stone, using for the movable coil aluminium wire covered with silk. The lightness and high conductivity of this metal, added to its extreme ductility, render it especially fit for this purpose. The suspension is bifilar, formed of fine silver gilt wire, also an excellent conductor, each suspending filament forming one of the electrodes.





ON

HYDATID TUMOURS OF THE ABDOMEN

AND

TUMOURS SIMULATING THEM.

BY J. S. BRISTOWE.

CASE 1. *Hydatid tumours in abdomen associated with pregnancy ; hydatid thrill in small hard tumour only.*—E. A. W—, a married woman, aged 26, was admitted under my care on the 28th February, 1882.

She has been a healthy woman, and has had three children, and believes herself to be now four months gone in her fourth pregnancy. During her last pregnancy, about two and a half years ago, she first observed a swelling in her abdomen about the size of a hen's egg, which she thought would disappear after her confinement. It has, however, increased uniformly though slowly since that time, and has latterly been at times tender and painful—the pain being of an aching character. About a month ago she first noticed a second tumour.

The patient is well nourished and healthy looking, but pale. She complains only of pain and enlargement of the abdomen.

On examination, the belly is found to be large and irregular in form, and to measure thirty-six inches round at the level of the umbilicus. Four distinct tumours are easily discovered in it. One, the largest, roughly speaking of the shape and size of a cocoa nut, occupies the left hypochondriac and lumbar

regions, encroaching below on the upper and outer part of the umbilical region. It occupies as nearly as possible the position which an enlarged spleen might occupy, produces a manifest bulging of the surface of the part of the abdomen in which it is situated, and slight bulging of the lower ribs on the same side, and can be traced far back into the loin. It is scarcely movable with respiration, dull on percussion (the dulness extending upwards to the seventh rib), tense, elastic, and fluctuating. The spleen cannot be recognised independently of it, but a distinct interval of resonance separates it from the adjoining liver. The second tumour (that which she first recognised a month ago) is ovoid in shape, and about the size of a large orange; it lies to the right of the navel, occupying the outer part of the umbilical and part of the adjoining right lumbar region; it is dull on percussion, not so tense as the other, but fluctuates distinctly. It is slightly movable. The third tumour springs apparently from the left iliac fossa, extending, however, slightly to the right of the median line. It is about the same size as the last, softer and much less distinctly defined than either of the others, and perhaps rather more freely movable than they are. The remaining two tumours are hard, unyielding, and apparently solid; the larger of the two, a flattened ovoid body about as large as a pigeon's egg, lies usually immediately below the second of the above-described tumours, but it is freely movable, and can be made to slide between its neighbour and the abdominal parietes, and indeed can be readily displaced as much as three or four inches from its original site. The fifth tumour is about half the size of the last, is as freely movable as it, is not always discoverable, but generally lies somewhere between the first and second tumours. The abdominal parietes, except where they are stretched over the tumours, are soft and flaccid, there is no trace of ascitic fluid, or of any morbid condition whatever beyond what has been described, and usually there are intervals of resonance between the three larger tumours, and between them and the liver.

No other disease whatever was discovered.

Although fluctuation was present, no typical hydatid thrill could be detected in the larger tumours. There was no doubt, however, that at any rate the larger tumours were hydatid

cysts; and it was assumed that the two smaller ones (though feeling solid) were of the same nature.

On the 2nd March, Tumour No. 1 was aspirated with a fine trocar and cannula, and sixteen ounces of transparent, straw-coloured fluid were removed from it. No attempt was made to empty it. The fluid was void of albumen, contained excess of chlorides; and under the microscope a few hooklets, but no echinococci, were found. She vomited during the night following the operation; and for two or three days the temperature was febrile, rising as high as 101° , the pulse was rapid, and she had some tenderness and uneasiness in the situation of the tumour. It also became nearly as large as it was at first.

On the 7th, having been well for two days, Tumour No. 2 was aspirated in the same way as the other, and about twenty ounces of fluid were removed from it. This was colourless, transparent, free from albumen, and abounding in chlorides. No echinococci or hooklets were discovered. Vomiting, elevation of temperature, and quickening of pulse followed this operation as they had done the other. But all subsided after a day or two.

At the end of a week or so, both tumours, which had been tapped, were much smaller and more flaccid than they were before tapping, but still fluctuated distinctly; and a well-marked thrill (scarcely the typical hydatid thrill, however) was presented by both of them. My house physician, Mr. Carpenter, about this time bethought him of percussing the two small, hard, apparently solid tumours which I have spoken of as Tumours 4 and 5, and to his surprise, on percussing No. 4, the larger of the two, he obtained from it a most unmistakable hydatid thrill. He pointed out this circumstance to me, and from that time until the patient left the hospital I had frequent opportunities of verifying and demonstrating to my class the fact that the most typical and exquisite hydatid thrill that I think I ever observed could be elicited from this tumour by percussion. We failed to obtain the same phenomenon from the smaller one of the two.

After the second tumour had been tapped my intention was to proceed as soon as convenient to the tapping of Tumour No. 3, or that which lay in the lower part of the abdomen and on the left side.

On two or three consecutive occasions I examined it with the intention of forthwith operating; but on each, although it was as obvious as any of the others had been (forming a visible rounded projection, being dull on percussion, and capable of accurate definition by manipulation), in the course of examination it became more and more difficult to define it; and consequently, although I could still recognise it vaguely and by the presence of dulness, I decided on each occasion to defer paracentesis until my next visit. I must acknowledge that I had not hitherto given much thought to her asserted pregnancy; and that it had not struck me that this tumour, which lay to the left of the median line, might be the pregnant uterus. At length, however, I began to suspect; and then on instituting a careful stethoscopic examination of the supposed hydatid cyst, I discovered without much difficulty the beats of the foetal heart, and was able to demonstrate the foetal cardiac sounds to my class.

She was discharged a month after admission; the tapped cysts at this time having undergone considerable diminution. But she felt well, was anxious to resume her domestic duties, and promised to return on some future occasion, if not before, at any rate after, her confinement. The typical hydatid thrill in the small, hard tumour, was found after its first discovery to be always obtainable.

CASE 2. *Abdominal cancerous and hydatid tumours.*—J. B—, a stoker, æt. 41, was admitted under my care on the 22nd November, 1881. Has had good health until recently, with the exception that twenty-one years ago he had a sharp attack of ague, which lasted for fourteen weeks. His present illness came on about fourteen weeks ago with severe pain, chiefly in the lumbar vertebræ and left loin, shooting to angle of scapula and front of chest. This has been incessant ever since, but liable to exacerbation, and on the whole increasing in severity down to the present time. He describes it as of a gnawing character. Not long after the commencement of his illness he began to complain of difficulty in passing his water, which came away in a small stream; and of obstinate constipation. In these respects he has improved lately. He has complained much of flatulence, and distension of the abdomen, and almost

complete anorexia; and he has rapidly lost flesh and strength. The pain has prevented him from sleeping.

He is much emaciated, has a very dark complexion, and an expression of great anxiety. He complains of weakness, loss of appetite, constipation, abdominal tenderness, and severe pain, which is nearly constant, in the left loin and in other parts of the abdomen and back. His abdomen, which is somewhat full and tense, is so extremely tender that he can scarcely bear to have it touched, much less examined. He lies habitually on the right side, and the lower ribs on that side bulge somewhat.

There is no disease discoverable in the chest, and the urine is normal. Tongue clean. Pulse feeble, rapid. Temperature 101.8°.

He was treated with morphia, which had the effect of largely allaying his constant pain, and so far diminished his abdominal tenderness that in the course of a few days the condition of the abdomen could be carefully investigated. It was now found that the liver was much enlarged. Its dulness extended from the sixth rib in the nipple line to near the umbilicus. The lower margin of the organ was hard, defined, and pretty regular in outline; the surface of the organ between the edge and the ribs was hard, and on the whole smooth, but a little to the left of and below the ensiform cartilage there was a flat, roundish projection, apparently about an inch in diameter. The liver moved freely during respiration. No enlargement of the spleen was detected. But in the lower part of the left hypochondriac region, and extending also into the adjoining lumbar and umbilical regions, was a hard rounded tumour, about the size of a small orange. This was fixed, and the respiratory movements had no influence over it. Deeply seated between the umbilicus and right groin, but nearer the groin, was another hard, rounded, immovable tumour, about as large as a hen's egg. There were no signs of ascites.

On the 28th it was noted that his pains had been much relieved, and that he felt better and more cheerful. But there was no improvement as regards strength, and his bowels had not been relieved since admission. On making a digital examination of the rectum a soft and apparently ulcerated mass was found projecting from its posterior wall, at a distance

of about two inches from the anus. The finger could not be passed beyond it.

From this time onwards there was little change, except that he gradually became weaker and more emaciated. At one time he complained of severe pain along the left great sciatic nerve; and towards the end of his illness some œdema appeared in the lower extremities. His temperature varied from 98° to 102.4° , and his pulse (which was very small and feeble) from 92 and 120.

He died on the 24th December.

The post-mortem examination was made next day.

The liver (which weighed seven pounds one ounce) was adherent to the diaphragm, studded thickly with large cancerous masses, of which one projected from the surface in the situation in which a hard nodule had been detected during life, and contained embedded in its right lobe a largish hydatid cyst, with thickened and in some places calcareous walls, and containing many hydatids and echinococci.

Two hydatid cysts were found in connection with the peritoneum. The larger one, which was above, sprung from the great omentum. It was about the size of a jargonelle pear, somewhat pyriform in shape, but irregular, and presenting one or two rounded projections. It had dense fibrous walls, about one eighth or one tenth of an inch thick, and contained within it innumerable small hydatids. The smaller, which was below, sprung from the mesentery, and was embedded in a mass of cancerous glands. It was rounded, but irregular in form, and presented generally the same characters as the other.

The retro-peritoneal glands were the seat of cancerous growth, which growth also invaded the pancreas and the left supra-renal capsule.

The spleen was small.

All the other abdominal viscera, including the peritoneum itself, were healthy, with the exception that another hydatid tumour was discovered in connection with the lower part of the rectum, and had doubtless formed the tumour recognised during life.

The thoracic organs were all healthy.

CASE 3. *Parovarian cyst simulating an hydatid tumour.*—

K. E. M—, a plump, healthy-looking girl, æt. 17, was admitted under my care on the 22nd March, 1880. She gave the following history of herself:—About a year and a half ago she first noticed a swelling in the lower part of the belly, which gradually increased in size until the abdomen generally became distended with it. She had had occasional pain after exertion, mainly in the right lumbar region, but in all other respects seems to have been perfectly well. No sickness or loss of appetite; no affection of the bowels or urinary organs; no dropsy in the legs; no palpitation or difficulty of breathing. The catamenia first appeared about a year ago, but have appeared rarely and scantily since.

On admission there was manifest uniform and painless enlargement of the belly, which measured thirty-three inches and a half in girth at the umbilicus. There was dulness on percussion all over the front from the pubes to the epigastrium, with resonance in the flanks and an interval of resonance between the upper part of the dull area and the liver and spleen. The dull area did not shift with the movements of the patient, was oval in form, the long diameter being vertical and corresponding to the mesial line of the abdomen. It measured probably twelve or thirteen inches in length, and eight or nine in breadth. It was remarkably thin in proportion to its other dimensions, appearing to be not more than two or three inches thick. It was also very flaccid, and the fluctuation produced in it by percussion was remarkably prolonged, suggesting the hydatid thrill, excepting that the successive waves gave the impression of being large and individually appreciable. The liver and spleen presented no signs of enlargement. The urine was normal. The thoracic organs were healthy.

On the 28th menstruation came on; it was scanty, and continued until the 1st April.

On the 7th April a small trocar and cannula were introduced, and about two pints and a half of colourless transparent fluid were removed. This had a specific gravity of 1012, gave no reaction with nitric acid or with heat, but yielded a copious precipitate with nitrate of silver, which was soluble in nitric acid. No hooklets were detected in it.

Nothing of any importance happened subsequently. After the operation the dulness on percussion extended up to the

umbilicus, but the tumour in the course of a few days became indistinguishable as a tumour, and the girth of the abdomen was reduced to twenty-seven inches and a quarter. The tumour did not refill, and at the time of her leaving the hospital on the 15th May, although there was still some dulness on percussion in the lower part of the abdomen, no definite tumour could be felt, no fluctuation could be elicited, her abdomen was not noticeably large, and she felt and looked well.

It was believed at first that the tumour was an hydatid cyst, but its flaccidity, its thin walls, its large superficial extent, its behaviour after tapping, its solitariness, and a comparison of the case with published cases of parovarian dropsy satisfied me that the cyst was one of parovarian origin.

Remarks.—The three cases above recounted have been brought together in the same paper, because, although the chief points of interest in each case are special to itself, there are still more or less obvious clinical relationships between them.

In the first case, a woman who stated that she was three or four months gone in pregnancy, presented five obvious abdominal tumours, of which three were large, rounded, and elastic, and fluctuated more or less distinctly; and two were small, hard, and judging from palpation solid. There was no doubt in my mind that the three large tumours were hydatid cysts; and I had good reason, therefore, to assume that the smaller bodies also were hydatid cysts. Two of the large cysts were successively punctured, and from each of them was withdrawn the fluid characteristic of living hydatid cysts, in one instance hooklets of echinococci being discovered. The third large cyst, I reserved to the last. I confess that for some time I did not doubt that this, like the other two, was hydatid. Although situated at the lower part of the abdomen, it lay almost entirely to the left of the median line, it formed like the others a distinct circumscribed, roundish protrusion, and it appeared to fluctuate. But it was a curious circumstance, to which I have already referred, that on each occasion when I intended to tap it, it modified its character under manipulation, it became less and less distinct until, though dulness on percussion still remained, I decided to defer the operation to a future occasion. There

can be no doubt that this peculiar behaviour of the tumour ought to have suggested to me at first, what struck me later, that I was not here dealing with an ordinary defined and unchangeable cyst, but with a cyst having muscular parietes which were capable of undergoing alternate contraction and dilatation, that in fact the tumour was not an hydatid cyst, but the gravid uterus. When at length this suspicion flashed across my mind, I began to attach importance to her statement that she was in the family way, which hitherto I had not given any thought to, and I did what I ought to have done at first, namely, examined the tumour with the stethoscope. The result was, as I have stated, that I easily detected the pulsations of the foetal heart, and was able to demonstrate the phenomenon to my class. I give the clinical facts of the case as they presented themselves to me, because by having them thus placed before him the reader is more likely to be impressed with the considerations which at first misled me with regard to the uterine tumour, and with those which finally led me to a correct diagnosis, and thus to learn from the case the lesson which it teaches. It is true that no harm was done, but it is quite clear that I was on the verge of doing harm.

The other point of special interest in this case is connected with the hydatid thrill. Feeling sure that this was a case of hydatids, I endeavoured to elicit the hydatid thrill in the three larger cysts, and so also on several occasions did my house physician, and others who saw the case with me. There was no doubt obvious fluctuation, at any rate in the two which were tapped; and some of my class believed they recognised the hydatid thrill. I did not, however, myself feel justified in allowing that we ever obtained from them the genuine, or at any rate, the typical thrill. Fortunately, my house physician was not content with only examining the three larger cysts, but he percussed also the smaller ones; and to his surprise, as has been already stated, he detected in the larger of the two apparently hard solid tumours a most marked thrill on percussion. This fact I and others verified subsequently over and over again. The thrill, which was perhaps the most exquisite example of the hydatid thrill I have ever felt, was obtainable with the greatest ease and without fail. Until this time I must acknowledge I had no suspicion that the thrill could be

obtained from such tumours; and so far as I recollect I had never on any previous occasion percussed such tumours with the object of thus ascertaining whether or not they were hydatids.

In the second case, a man was admitted who for some months had been losing flesh and strength, had been vomiting, and had had intense abdominal pain; and who, on admission, was found to have a large irregular liver, with one distinct hard nodule in it, and two rounded but somewhat irregular tumours in other parts of the belly. The view I took of the case was, I suppose, the natural view to take under the circumstances. It was that the patient was suffering from abdominal (probably peritoneal) cancer, with secondary cancerous growths in the liver. That the affection of the liver was cancerous was a diagnosis which rested mainly on the detection of tumours in the belly. These latter tumours, however, turned out to be hydatids; so that the diagnosis of cancer of the liver, which was in fact correct, rested on an erroneous appreciation of the facts of the case. Whether I should have ventured to diagnose cancer of the liver had I known the real nature of the abdominal tumours outside the liver I do not know. Probably I should not. This case occurred before the former one. But I cannot doubt now that had the tumours in the peritoneum been percussed the hydatid thrill would have been detected in them, and my diagnosis of the case would have been modified.

The third case I have recited was also one from which I learnt an important lesson. A young, healthy-looking girl had a large flaccid abdominal cyst, which, springing from the pelvis, occupied nearly the whole of the front of the abdomen. It was evidently thin-walled, and it fluctuated with remarkable distinctness. Indeed, the fluctuation was so distinct and so prolonged that over and over again I discussed with my class whether or not it ought to be regarded as a modified hydatid thrill—I say modified because (although it was prolonged) the successive waves were large and individually recognisable, and did not collectively constitute a mere tremor. On tapping the cyst we removed a considerable quantity of limpid colourless fluid, like water, of very low specific gravity, free from albumen, and containing a largish quantity of chlorides—a kind of fluid which is generally regarded as characteristic of hydatid cysts. No parasitic elements, however, were discovered in it. A

further point of interest about the case was that the cyst, after paracentesis, underwent such extreme collapse that its remains could scarcely be distinguished, and in a short time all recognisable traces of it had disappeared absolutely. This phenomenon confirmed, of course, what had been recognised before, that the cyst wall was extremely thin, but was not compatible with what we know of the structure of hydatid cysts, and of the behaviour of the contents of such cysts after tapping. If the case was not one of hydatids, what was it? Shall I confess that I could not at first answer the question, and that it was only after consulting Dr. Barnes's and Dr. Matthews Duncan's writings that I satisfied myself that the case was one of parovarian dropsy? I was well acquainted with the morbid anatomy of parovarian cysts, the extreme tenuity of their walls, and the watery character of their contents. I had in former years seen them and examined them in the dead-house. But I had never seen one larger than an orange, and I think the description given of them by Virchow corresponds with my experience. However, there can be no doubt that they do occasionally attain large dimensions, and there can be no doubt, I think, that this was a typical and striking example of the disease. It is clear, therefore, that they are apt to simulate hydatid tumours in some of those features which are supposed to be most typical of hydatids, and thus to mislead the unwary practitioner.

CONGENITAL HYPERTROPHY.

BY WILLIAM ANDERSON.

CASES of giant growth of the hands, feet, and other portions of the frame are too seldom met with to receive the attention which their peculiarities deserve, hence the condition, although well known to English surgeons, has scarcely found a place in our text-books.

The earliest examples recorded in this country were those of Dr. Reid, published in the 'London and Edinburgh Monthly Journal of Medical Science' for March, 1843, but before this date a characteristic case of makrodactyly had been carefully described by von Klein,¹ and other instances had been brought forward by Beck,² and Wagner.³ Reid's paper was followed by a valuable article by Curling,⁴ and contributions by Ideler,⁵ Adams,⁶ Devouges,⁷ Chassaignac,⁸ Annandale,⁹ and others, but the first attempt to classify the cases was that of Busch¹⁰ in

¹ 'Journal der Chirurg. und Augenheilk.,' v. Graefe u. Walther, 1824.

² 'Med. Annalen,' v. Puchelt, Chelius, u. Nägele, 1836.

³ 'Schmidt's Jahrbucher,' 1842.

⁴ 'Medico-Chirurgical Transactions,' vol. xxviii.

⁵ 'Dissertation,' Berlin. Quoted by Busch. See below.

⁶ 'Lancet,' Aug., 1858.

⁷ 'Bulletin de la Soc. Anat.,' 1856.

⁸ 'Bulletin de la Soc. de Chirurg.,' 1st series, vol. xviii. 'Gazette des Hôpitaux,' 1858.

⁹ 'Malformations, Diseases, and Injuries of Fingers and Toes,' 1865.

¹⁰ "Beiträge z. Kenntniss der Angeb. Hypert. der Extrem." 'Langenbeck's Arch.,' 1867.

1866. Since this time many additions have been made to the literature of the subject, amongst which a paper by Trélat and Monod¹ deserves especial mention. The most recent works are those of Vogt² and v. Fischer,³ by the latter of whom the various forms of the affection are elaborately analysed and illustrated.

The condition may be defined as a gigantic growth, probably congenital in origin, of various segments of the body exclusive of the viscera. It is almost invariably unilateral, and is generally limited to one extremity or portion of an extremity; it tends to implicate especially the bony, ligamentous, and integumentary tissues, and is frequently associated with lipomata, and with angiectases and angiomata in connection with the circulatory and lymphatic systems. It does not, as a rule, impair to any important extent the functional capacity of the part.

The name "congenital hypertrophy," by which the affection is now most commonly known, is open to criticism. There is little doubt that the abnormality always has its origin in foetal life, but as yet direct evidence of its existence at birth has seldom been adduced. In only three cases, those of Owen,⁴ Higginbottom, and Friedberg,⁵ has it been averred that the deformity was seen immediately after the delivery of the child, and on the other hand, in at least one case, that of Lannelongue,⁶ a *macroactylie elephantiasique* in a child, appeared to have as its exciting cause an operation for the separation of two united fingers. It is certain that if the enlargement be always present at birth it is never so disproportionate as to interfere with parturition, nor is it in general even sufficiently marked to attract the notice of the parents or friends: the colossal proportions subsequently observed are hence the result of excessive growth in early infancy and childhood.

The right to rank with the hypertrophies is much more doubtful than the intra-uterine origin, for although in certain cases, at present not specially distinguished from the rest, the

¹ "De l'hypertrophie unilaterale," 'Arch. gén. de Médecine,' May and June, 1869.

² 'Deutsche Chirurgie,' Lief. 64.

³ "Der Riesenwuchs," 'Deutsche Zeitschrift für Chirurgie,' 1880, Bd. 12.

⁴ Quoted by Curling (l. c.)

⁵ 'Petersburger Med. Zeitsch.,' Bd. 14, 1863.

⁶ 'Bulletin de la Soc. de Chirurgie,' Dec., 1880.

ordinary characters of true hypertrophy are present, in the great majority of instances the unequal distribution of the hyperplasia amongst the different tissues, the frequent association of other congenital deformities, of tumour growths, and of ankylosis and articular distortions, together with the defective ratio that the arterial supply and functional power bear to the amount of constructive material, relegate the pathological process to a lower status than that occupied by the true hypertrophies.

The *etiology* is very obscure. The affection is not hereditary, and it cannot be attributed to any known influences arising during intra-uterine life, but, as in most congenital deformities, it has frequently happened that the mother has been able to conjure up some reminiscence of the period of gestation, which to her mind affords a perfectly satisfactory clue to the mystery. V. Klein relates in his case of makrodactyly that the mother while pregnant was bitten in the hand by a goose. A history of a fright was given in Adam's case, and in the instance reported at the end of the present paper, a giant growth of the lower extremity was attributed to the mother having been trodden upon by a cow. Such mental impressions are probably mere coincidences, and are often greatly exaggerated in narration, but until the possibility of their connection with foetal lesions is disproved, it is unadvisable to leave any facts of the kind unnoted.

Parts affected.—A peculiarity of the abnormality is its almost invariable limitation to one side of the body. Only three bilateral cases have been observed; those of Curling (l. c.), Owen (related by Curling), and Annandale, and in all of these the makroplasia was limited to the digits.¹ The nævi with which the hypertrophy is often associated are also nearly always confined to the affected side, but in two cases published by Chassaignac and Friedberg, they were found also upon the non-hypertrophied side, and in a second case of Chassaignac's were present only upon the unenlarged parts of the body.

The extent of the parts involved ranges from a single digit to an entire half of the body. When a whole limb is implicated the growth is always proportionately greater at the distal

¹ V. Fischer describes the case of Devouges as one in which parts on both sides were affected, but a reference to the original and to Chassaignac's report upon the same patient shows that the hypertrophy was unilateral.

extremity, but colossal development of the hand or foot seldom includes the whole of the digits. The localisation of the affection does not appear to be related to any special vascular or nervous territories; thus, in makrodactyly, the regions of distribution of the digital branches of both median and ulnar nerves may be encroached upon, while parts supplied by either or both of these may escape intact.

Commonly, however, both on the hand and foot, the hypertrophy selects a series of digits on the inner or outer side of the member, for example, on the first and second, or first, second and third, the fourth and fifth, or the third, fourth and fifth, not attacking them capriciously and without order; and coexistent circumscribed lipomata are almost invariably limited to that portion of the palm or sole which corresponds to the enlarged fingers or toes.

Its *course* is always in a certain sense progressive. Occasionally it appears to keep pace throughout with the general growth of the body, but, in nearly all cases, at some period the abnormal growth strides in advance, so that the disproportion of the affected part to the rest of the body becomes more and more pronounced. Its progress may be uniform and continuous, or terms of slow increase or apparent arrest may be succeeded by a new and rapid development.

In some instances the process does not extend beyond the primary limits, while in others it may spread centripetally, and often at a very rapid rate, as in v. Fischer's case (l. c.), in which amputation of an hypertrophied finger was followed within a few months by hypertrophy of the whole limb. The appended case serves also as an example of a well-marked progressive increase of the giant growth.

The addition of new tissue goes on, as a rule, without pain, inflammation, or interference with function; but in a case of v. Fischer's burning pain was associated with trophic ulceration, and Friedberg's patient,¹ who appeared to be the subject of an associated elephantiasis Arabum, had symptoms that somewhat resembled the inflammatory crises of elephantiasis.

The task of *classification* has hitherto been rendered somewhat difficult by the smallness of the number of fully-reported cases. The latest labour in this direction is that of v. Fischer

¹ 'Virchow's Archives,' 1867, vol. xl.

(1. c.), who divides the condition according to extent into three classes:—(1) general hypertrophy involving the whole body; (2) unilateral, affecting one half of the body; and (3) hypertrophy limited to one extremity or to one side of the face. The latter class is separated into (a) *symmetrical* cases of true giant growth, in which all the tissues are proportionately enlarged, the limbs symmetrically built, and more or less serviceable; and (b) *false*. These are in turn subdivided into smaller groups, amongst which is recognised a giant growth dependent upon abnormal development in certain of the soft parts, the skeleton not taking part in the process. This arrangement is an amplification of that previously adopted by Busch, who, however, omitted the first class, gave the name of “general hypertrophy” to the second, and made no attempt to go beyond the division of the third class (“partial hypertrophy”) into two forms, one corresponding to the symmetrical hypertrophy of Fischer, the other distinguished by the association of the bone enlargement with a disproportionate increase of the soft parts, and especially of the adipose tissue.

The classification of v. Fischer is in many respects unsatisfactory. Setting aside the question whether mere extent of a pathological process such as that under consideration can be accepted as a good basis for a primary grouping, it may be pointed out that the class of “general hypertrophy” is at present only a possibility.¹ “Unilateral hypertrophy” differs only from the third class in attacking more than one segment of the affected side, and although it may present the same varieties with respect to tissues implicated as the limited form, no distinction, as in the latter, between symmetrical and false has been considered necessary. Again, the analysis of the third class into “symmetrical” and “false” will not bear close examination, as in many of the examples of the so-called

¹ V. Fischer himself appears to be doubtful of the existence of cases that can be placed under this heading, but nevertheless alludes to three or four examples published by Friedreich (‘Virchow’s Archives,’ Bd. 43) and Frankel (‘Virchow’s Archives,’ Bd. 46). Reference to the original reports will show that these are altogether *hors de propos*, as in each instance the pseudogigantism began after puberty, and, unlike congenital hypertrophy, was associated with great muscular enfeeblement and peculiar constitutional symptoms. The occasional occurrence, however, of bilateral makrodactyly prepares us for the future production of true examples of a general bilateral *Riesenwuchs*.

“symmetrical” variety it may be shown that the implication of structures is by no means uniform or general, for although the veins may have undergone marked change, the arteries are not enlarged; the tendons near their insertion into the hypertrophied bones may be gigantic, but the muscles are not excessively developed; and the subcutaneous tissue may be considerably thickened, while the papillary layer of the skin takes no share in the increase of structure. In such a case a part may be enlarged, with preservation of an apparent symmetry in its own proportions, to three or four times its normal bulk, yet its arteries and some other structures may differ in no respect from those of the normal side.

The ‘false’ hypertrophy¹ of Busch differs from his symmetrical form only in the disproportionate growth of certain of the soft parts, but v. Fischer proposes to admit into the former group conditions in which a limb is increased in size solely by an excessive growth of fat, or by development of angiectases or angiomata in connection with the lymphatic or blood vascular systems. The propriety of introducing this new element into an already overstrained classification is very questionable, especially as scarcely a single case is recorded that can pass unchallenged into the category. No example of a purely lipomatous *Riesenhuchs* is known, and the same may be said of pseudo-hypertrophy of a limb constituted by a *lymphangioma cavernosum*; even the case of lymphangiectasis narrated by v. Fischer himself can scarcely be admitted, as the growth, which first showed itself in the penis, apparently did not commence until the age of seven.

The essential distinction of the cases of “congenital hypertrophy” appears to be into *true* and *false*, and it is advisable that these terms should be applied in all cases, irrespective of extent. It is, moreover, necessary that the apparently symmetrical cases should be displaced from their association with genuine hypertrophy, a task of some difficulty, owing to the imperfection of most of the reports.

True unilateral hypertrophy may be accepted as a fact, but is comparatively rare. The cases described long since in

¹ This term is not used by Busch, but is here applied as a convenient designation for his second form of “partial hypertrophy,” which corresponds in some degree to the “false” of v. Fischer.

general terms by Geoffroy St. Hilaire,¹ as marked by an unequal development of the two sides of the body in one or more regions, were probably of this nature, and a few may be selected from the medical periodicals, as having a somewhat doubtful claim to the same position. Ollier's case² appears to be entitled to a place in this class. In this the face, thorax, abdomen, and both extremities of one side were uniformly larger than the corresponding parts of the opposite half of the body. The vascularity of the hypertrophied side was increased, the temperature elevated, and the limbs were more powerful. There were no nævoid growths, and it is noteworthy that in association with an absence of evident abnormality of thoracic, pelvic, and abdominal viscera, the mammary glands preserved their symmetry. The cases of Devouges and Adams also presented certain points of resemblance to true hypertrophy. In the former the whole of one side was hypertrophied, except perhaps the abdominal wall, where nothing unusual was noticed. The details are very imperfect, but according to the patient's statement, the strength of the arm on the hypertrophied side was greatly in excess of that of its fellow. In Adams's case the giant growth of the right lower extremity was apparently uniform, and the femoral and all other accessible arteries were considerably enlarged, but nothing is said as to muscular power. In this as in the last example nævi were present. In two instances of unilateral hypertrophy of the face described by Friedrich³ and Passauer,⁴ the increased growth involved the whole of the parts of the affected side, even to the teeth and tongue, and in Friedrich's patient, and in a case brought by Dr. Heumann before a Medical Congress in Darmstadt, the hair was more developed, and the secretion of saliva was excessive on the affected side. The muscular power and arterial supply were not specially referred to. The coexistence of a purulent otorrhœa on the enlarged side in both of these cases is significant, as it indicates a possibility that the hypertrophy was acquired.

¹ 'Histoire générale et particulière des anomalies de l'organisation chez l'homme.'

² 'Gazette Medicale de Lyon,' July, 1862.

³ 'Archives für Path. Anat.,' vol. xxviii, 1863.

⁴ 'Virchow's Archives,' Bd. xxxvii, 1866.

In *false hypertrophy* the size of the part is augmented by an unequally distributed hyperplasia of the skeleton and soft parts. Almost all the cases narrated in detail are of this kind. In nearly all, the arterial supply is proportionate only to the normal size of the part, and the functional capacity (power, sensibility, &c.), although not seriously altered, is to some extent deteriorated. The cases may be for practical purposes divided into two groups :

1. Without deformity, the general symmetry of the part not being obviously altered.

2. With deformity.

- a. From predominant development of the adipose or vascular tissues.

- b. From secondary articular distortions.

- c. From associated defects of development, as syndactyly, &c.

The *condition of the different elements of the enlarged part*, as revealed by the investigations of Busch and others, is as follows :

Bones.—The bones are always enlarged (if v. Fischer's additional group be excluded). Their general shape is commonly preserved, but occasionally their extremities may be deformed by outgrowths at the line of junction with the articular cartilage. The hypertrophy reaches its greatest proportionate extent in the digits, while increase in size of the bones of the forearm, arm, leg, and thigh, is, as a rule, only demonstrable during life by admeasurement of length. No histological abnormality has been detected in the osseous tissue.

Joints.—The articular surfaces may present no peculiar features, but in some cases the cartilages show irregularities of surface. The ligaments are usually greatly thickened. The synovial membrane commonly has the ordinary characters, varied only by an excessive development of the plicæ adiposæ.

The *range of motion* is sometimes normal ; in other cases, the voluntary movements are more or less diminished in extent, while a fair amount of passive mobility is preserved ; and in others, there is complete ankylosis.

Distortions, such as lateralisation and hyperextension, are frequent.

Muscles and tendons.—The tendons inserted into the enlarged bones have been found proportionately over-developed. The muscles, however, are seldom hypertrophied, and occasionally, as in Busch's case, may undergo an atrophy secondary to the impaired mobility of the joint. In a case of v. Fischer's muscular hypertrophy was demonstrated, but no evidence of increased power was present, and judging by the comparative disuse of the limb, it is probable that the strength was lessened. The muscular power is probably, as a rule, so far augmented in response to functional necessity that the enlarged part may be used without more sense of effort than that which accompanies the same actions on the normal side, as in Wagner's case (l.c.), in which the hand weighed about twelve pounds, and yet could be moved with perfect ease; there is, however, rarely any such absolute increase of strength as would indicate a genuine muscular hypertrophy. Devouges' and Adams' cases may be referred to as possible exceptions.

Blood-vessels.—The arteries in all the instances of false hypertrophy, with the exception of Reid's cases,¹ were of ordinary size and not enlarged in proportion to the gigantic development of the part to be nourished. This is a fact of considerable pathological significance.

The veins and capillaries, unlike the arteries, appear especially liable to change. Varicosities of the veins are very common, and in some cases great thickening of the walls may be super-added (Busch, l. c.).

In Wagner's case, the fingers of the hypertrophied hand were said to become as red as a "*Blutschwamm*" when the member hung down, the arteries being nevertheless of normal size.

Angiectases and angiomas are frequently seen. Capillary nævi of enormous extent sometimes coexist (as in Adams' case, in which the whole lower extremity and buttock were involved), and are usually, but not invariably, confined to the hypertrophied parts.

The *lymphatics* are liable to dilatation, and may form diffuse swellings or soft tumours of considerable extent. The glands, however, are never affected.

¹ It is somewhat curious that in all three of Dr. Reid's cases, which in most respects were of the ordinary type, the arteries are said to have presented the exceptional peculiarity of enlargement.

The *nerve trunks* appear to be normal. The condition of the nerve centres has not yet been investigated.

The *integuments* nearly always participate in the changes, but the alterations are scarcely hypertrophic. The subcutaneous adipose layer commonly shows a diffuse thickening, and in addition may undergo a circumscribed hypertrophy in the form of large lipomatous pads, which are almost always found upon the flexor aspect of the member affected, and correspond in situation and extent to the bony enlargement; but the papillary and epithelial layers do not undergo any sensible changes, nor, as a rule, are the hairs or sebaceous follicles more developed than on the opposite side. The nails of hypertrophied digits generally undergo proportionate development. The secretion of perspiration is not sensibly altered in amount or character. The *cutaneous sensibility* is variously described as unaffected or diminished, never increased. It is probable, as v. Fischer suggests, that careful examination with the æsthesiometer, &c., would generally reveal an impairment of the faculties. A reduction of the sensibility to heat and pain was found to accompany the tactile defect in v. Fischer's case. Pain is rarely complained of. Burning pain was present in association with trophic ulceration in a case of v. Fischer's, and pains of a rheumatic character appeared in the instance now reported, but this symptom probably formed no part of the original disease.

The *temperature* of the part is generally normal. By exception, a rise of 2° — $2\frac{1}{2}^{\circ}$ Fahr., of 2° — 6° Fahr. (Reid), and of $\frac{1}{2}$ — 1° Cent. (Trelat and Monod), has been recorded.

Pathological complications are rarely met with. Trophic ulceration appeared in a case of v. Fischer's; and in Friedberg's case an eruption resembling pemphigus was noted, but probably was not directly connected with the congenital hypertrophy. Inflammatory crises, corresponding to those of elephantiasis arabum, have been seen in only one instance, and in this the condition appeared to be complicated by true elephantiasis.

Associated defects of development are not rare in connection with makrodactyly. They may consist of multiplication, dwarfing, absence, or fusion of parts.

Pathology.—The origin of the process is very obscure, and it cannot be said that the existing theories cast much light upon

it. The views as to its pathological origin propounded up to the present time are four in number :—(1) Congenital lesion of vaso-motor centres, leading to vascular stasis ; (2) A primitive vice of the middle lamina of the blastodermic membrane ; (3) partial intra-uterine strangulation of the affected member ; and (4) an inherent tendency of the tissues to appropriate an excess of nutriment. Of these, the first is perhaps the most suggestive, but leaves in obscurity the unequal distribution of the hyperplasia. The second, a rather unsatisfactory suggestion, is opposed by the fact that the walls of the trunk which are directly formed from the middle lamina are comparatively seldom implicated. The third fails to explain cases in which the entire half of the body is affected. Lastly, the fourth and perhaps the oldest view, though less open to objection than the others, resembles the second in only removing the difficulty a step back, and gives us a new problem, the explanation of the abnormal greed of certain elementary parts. For the present the question must be left open until sounder data are afforded by future opportunities of pathological investigation.

Case of congenital hypertrophy of the left lower extremity.—J. C—, a married woman, æt. 25, attended as an out-patient at St. Thomas's Hospital, in May, 1881.

History.—From the time of the patient's earliest recollection, the left foot has been larger than the right. There is, however, no evidence as to the condition of the part at birth.

Up to the age of twenty, the increase of the affected member was apparently in proportion to the general growth of the body. After this period and shortly after her marriage, she noticed a considerable enlargement of the leg, and soft tumour-like prominences appeared over the knee and upper part of the tibia. The abnormal development now made a perceptible and independent progress, and three and a half years later, after the birth of her third child, the makroplasia invaded the thigh and buttock.

The process was painless and the functions remained unimpaired until about three months before admission, when the left knee and ankle were attacked by symptoms of a rheumatic character, which have left a certain amount of weakness and discomfort of the limb.

She has had three children, aged respectively fifteen months, three years, and four years, and is now in the third month of her fourth pregnancy. Catamenia have been suppressed since marriage, probably owing to the absence of any interval between pregnancy and lactation.

Her health has always been good.

The family history is negative as regards the existence of inherited tendency to disease or malformation. Her children are all alive and well.

The patient volunteered the statement, as an attempt to explain the deformity, that a few months before her birth, her mother's foot was trodden upon by a cow.

Condition on admission.—Left lower extremity, including buttock, generally but not uniformly enlarged. The excessive development is greatest in the foot, and is limited almost entirely to the inner half of the member. The front of the leg and the knee present soft tumours.

Foot.—First and second toes of colossal proportions; the enlargement depends chiefly upon a makroplasia of the phalanges and heads of the metatarsal bones. Superficial soft parts more or less thickened over the whole foot, but especially over the inner half and on the plantar surface, forming in the latter situation a thick callous pad of squarish outline, extending from the roots of the toes to the middle of the sole; behind this is a small circular nodule of similar character and also distinctly margined.

The affected bones preserve their normal contours. The second toe is relatively more hypertrophied than the first; and is separated from it by a distance of about half an inch. The nail of the great toe is enlarged in proportion to its phalanx, but that of the second toe is comparatively small and partly concealed by the overlapping integuments.

The joints are mobile, but the range of voluntary movement is somewhat diminished.

The tendons on the extensor aspect are apparently enlarged, but it is difficult to define them accurately.

Leg increased in girth, principally by augmented thickness of the subcutaneous fatty layer; anterior aspect of its upper two-thirds occupied by an oval tumour of soft elastic consistence, continuous at its margins with the thickened adipose tissue of

the rest of the limb, and presenting over its most prominent part a nævoid dilatation of capillaries.

Knee shows a similar increase of subcutaneous adipose tissue, and in front and at the sides soft prominences like that over the tibia, but without nævoid patches.

Thigh and buttock enlarged in circumference. Superficial tissues thickened, especially on outer side. Labium not affected.

The condition of the bones of the thigh and leg cannot be ascertained. The muscles are not sensibly hypertrophied. The skin is smooth and hairless, as on the normal side, and when examined under a power of 30 diameters shows no peculiarity. The corium and cuticle do not appear to participate in increase of tissue.

The general tactile sensibility is reduced by about one third as compared with that of the opposite limb, and is most blunted over the nævoid patch on the leg. The sensibility to heat and pain is diminished in like proportion.

Circulatory system shows no abnormality. Pulsation of left femoral artery not perceptibly different from that of the right. No enlargement of superficial veins. Lymphatic glands normal. Functions of limb not greatly altered. The patient now complains of the weight of the foot and supervention of fatigue on slight exertion, but this symptom is of recent date, and apparently connected with a rheumatic attack. The gait is somewhat awkward, but there is no limping.

The surface temperature is normal.

Perspiratory secretion augmented at the upper part of the thigh, but in the rest of the limb is not different from that of the opposite side.

The measurements taken are as follows :

	Left.		Right.
Length from ant. superior spine of ilium to minor malleolus (in inches)	34 $\frac{1}{4}$	...	33
Length of foot from extremity of heel to end of great toe	10 $\frac{1}{2}$	...	8 $\frac{1}{2}$
Circumference of thigh (middle)	18 $\frac{1}{2}$	...	16
„ knee	16	...	12
„ leg (middle)	13 $\frac{1}{2}$	...	11 $\frac{1}{2}$
„ foot (around head of metatarsal bone)	10 $\frac{3}{4}$	...	8 $\frac{3}{4}$

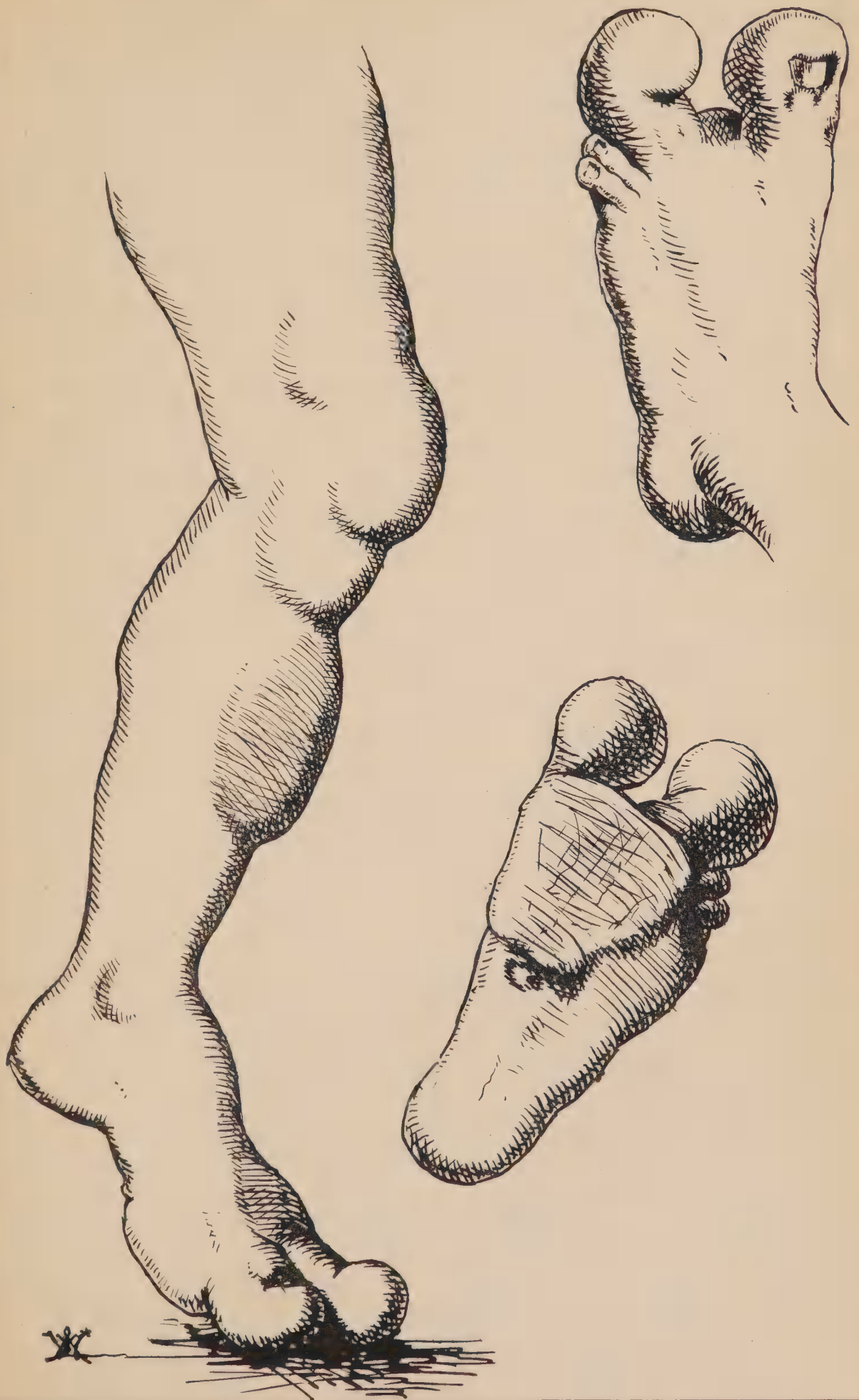
	Left.	Right.
Circumference of great toe (over head of meta-		
tarsal phalanx) . . .	5 $\frac{1}{2}$...	3
„ second toe (at bulb) . . .	5 ...	1 $\frac{3}{4}$

Remarks.—This case may be described as one of giant growth of one extremity, with tumour formation in connection with the superficial soft parts. The osseous hyperplasia was, as usual, most marked at the distal end of the limb, and did not affect all parts of the foot to a like extent. Growth was progressive, and increased most rapidly after the ordinary body growth had almost reached its complete development.

The structures principally concerned in the textural increase were the bones and subcutaneous fat; the tumour prominences on the leg and knee were probably lymphangiectases. On the other hand, there was no indication of excessive development of muscle, the blood-vessels were not perceptibly dilated or thickened, the lymphatic glands were not enlarged, and the skin showed no change beyond the diminution of its sensory functions.

There is no reason to doubt the intra-uterine origin of the affection, although no positive information on the point was forthcoming.

The patient ceased attendance after the third visit, and the subsequent progress of the case could not be ascertained.



To Illustrate M^r W^m Anderson's Article on Congenital Hypertrophy.

THOMAS BEVILL PEACOCK, M.D., F.R.C.P.

By the death of Dr. Peacock the medical profession in London has lost one of its best known and most respected members, and St. Thomas's Hospital one of its chief ornaments. He had been ailing, however, for some years, and his death, though sudden at the last, was not unexpected. In February, 1877, he was present at Sir James Paget's Hunterian Oration, and was to have been a guest at the Hunterian banquet later in the day. But his seat remained empty, for, while dressing for dinner, he was suddenly struck down by an attack of left hemiplegia. This illness, which attacked him entirely without warning, laid him up for many months, and led to his giving up all his more important public appointments. After a partial recovery he resumed private practice, and continued to take an active part in the proceedings of societies, and to publish valuable papers on various, but mainly, clinical subjects. He laboured, however, under the heavy disadvantages of failing physical power and mental weariness, which were painfully apparent to his friends. About fifteen months ago he experienced a second slight seizure, which affected his right side slightly, but from which he recovered. His last and fatal attack occurred on the 30th of May, 1882, in St. Thomas's Hospital, whither he had accompanied some friends for the purpose of showing them over that institution. He fell down in one of the corridors, was carried unconscious into one of the wards to which he had formerly been physician, and died that same evening in the very place, tended by the very nursing staff, and under circumstances which, could he in health have determined the conditions of his death, he would probably have chosen.

Dr. Peacock was born at York on the 21st December, 1812,

of Quaker parentage, his father being Thomas Peacock, a merchant of that town, his mother, Sarah Peacock (formerly Bevill), a native of Cambridgeshire. He had several brothers, none of whom attained adult age, and several sisters, of whom only two survive. Shortly after his birth his family removed to Scarborough. At nine years of age he was sent to a boarding-school at Kendal, kept by a Mr. Samuel Marshall, of whom he always spoke with great respect. He remained there until he was sixteen, and then, being opposed in his wish to become a sailor, he elected to enter the medical profession, and was apprenticed to Mr. John Fothergill, a surgeon of Darlington, with whom he remained five years.

On the completion of his term of apprenticeship, in the year 1833, he was entered as a student at the newly-established Medical School of University College, London, and here commenced his life-long friendship with Dr. Davies-Colley, of Chester. He attended, amongst others, the lectures of Dr. Elliotson on Medicine, and those of Mr. Samuel Cooper on Surgery; and Dr. Davies-Colley records the painstaking care with which, evening after evening, he used to elaborate the extensive notes of lectures he had taken during the day. While pursuing his medical studies he also, at his father's request, turned his attention to dentistry, and for a while spent some time each day with the late Mr. Nasmyth, the eminent dentist of George Street, Hanover Square. Of this, however, he soon tired, and thenceforth gave his undivided attention to medicine. His clinical studies were pursued at St. George's Hospital.

In 1835 he became a member of the Royal College of Surgeons and a Licentiate of the Society of Apothecaries. At this time he fell into delicate health and was advised to take a sea voyage. Consequently he went to Ceylon as surgeon to a ship, and the next year (1836) made a second voyage to the same place. It was probably just after this that he studied for some months in Paris.

Dr. Peacock's first important appointment after he had qualified was to the house-surgency of the Infirmary at Chester, in which town his family had taken up their residence from about the time when he first went to London. This was early in 1838. He remained here four years, and during the whole

of this time worked with extraordinary zeal, taking copious notes of cases, performing and making exact records of post-mortem examinations, and putting up numerous valuable preparations. He always looked back with peculiar pleasure to the years he spent at Chester, and regarded them as an important era in his professional life.

In 1841 he went to Edinburgh, where he graduated in 1842. While there he acted for a time as house-physician to the Royal Infirmary, and was also appointed pathologist, the duties of which office he performed with the zeal and scrupulous accuracy which characterised all his work. Of Edinburgh he had ever a vivid and grateful recollection, and attributed much of his success in later life to the experience and knowledge he acquired there. Especially he used to speak in the warmest terms of the teaching of the late Dr. Alison, and of the friends he then made. There is no doubt that the experience he gained there, particularly in respect of fevers and morbid anatomy, was of the highest value to him.

He came to London in 1843 or 1844, and in this latter year became a Licentiate of the Royal College of Physicians. His first appointment as physician in London was to the Aldersgate Street Dispensary; his next to the Royal Free Hospital. About this time also, with the assistance mainly of the Gurneys, Barclays, and Tuckers (with which latter family he was connected by marriage), he started in Liverpool Street the City of London Hospital for Diseases of the Chest, which later, and mainly through his own exertions and influence, developed into the now celebrated Victoria Park Hospital for Diseases of the Chest, an institution for which, not unnaturally, he had ever a deep affection, to the service of which he devoted a large portion of his active professional life, and with which he kept up a close connection to the day of his death.

In 1849 he obtained the assistant-physiciancy to St. Thomas's Hospital, and at the same time severed his connection with the Royal Free Hospital. From the Aldersgate Street Dispensary he had previously retired. From this time forth he devoted himself with unwearied zeal to the duties of his two hospital appointments—duties which were never allowed to interfere with one another, and to which the claims of private practice were always postponed.

At St. Thomas's he very soon made his influence felt; the thoroughness and conscientiousness of his work, and the extent and precision of his pathological and clinical knowledge, soon attracted the students; and his genuine kindness and his simplicity of manner won for him the respect and affection of all with whom he became closely associated. These characteristics he maintained during the whole period of his connection with the hospital.

Almost from the first he took an active and leading part in the affairs of the Hospital and School. He lectured for some years on *Materia Medica*, and for more on *Medicine*; and during the later period of his service acted also as Dean of the Medical School. Further, for some time after its first establishment, he conducted the skin clinique. He was not even satisfied with these duties, but always took a warm and active interest in the School of Nursing at St. Thomas's, and for many years delivered an annual course of lectures on *Medicine* to the nurses. He was promoted to be physician to the hospital in 1862, and retired after his severe illness in 1877, when the honorary title of consulting physician was conferred upon him.

Dr. Peacock's love for his profession was genuine and unflinching. From first to last he kept careful notes of all his cases, and of the pathological lessons of such as proved fatal, and he was indefatigable in dissecting and putting up morbid specimens. The valuable material which he thus accumulated must have been enormous. Nor was it wasted, for, if not a voluminous writer, he was at any rate a frequent writer, and his writings always bore the impress of close observation and of laborious accuracy and fulness. To a large extent, his more important contributions to medical literature were condensed epitomes of his experience and reading, and abounded in careful and well-considered statistics. They were generally, therefore, less adapted for continuous reading than for close study and frequent reference. His contributions to journals and to the transactions of societies, more especially the Pathological Society, were almost innumerable. His more important works were his treatise on the "*Influenza of 1847*," his lectures on the "*Varieties of Continued Fevers and their Discrimination*," his lectures on the "*Malformations, &c., of the human Heart*,"

his Croonian lectures on "Some of the Causes and Effects of Valvular Disease," his report on "Diseases of Metalliferous Miners," and his treatise on "Prognosis in Valvular Diseases of the Heart."

As a teacher he exhibited the same qualities as he did as a writer ; he was conscientious, laborious, methodical, accurate, and statistical. His instruction, whether by the bedside or in the Lecture Theatre, was always valuable, if somewhat dry. As a lecturer he made no attempt at eloquence, and never enlivened his discourse with gleams of humour or appropriate anecdotes, but he was singularly fluent and clear, and always said exactly what he meant to say, and always gave due credit to the numerous authorities whom he quoted. In the wards he was always most considerate and kind to patients, and courteous to nurses and to students. He taught well and accurately, but his method of teaching was not interesting or attractive. It consisted mainly, in fact, of a careful personal examination of each patient, and in dictating aloud to his clerks (who were expected to take his words down exactly) the results of his examination, his diagnosis, and treatment.

Next to his profession Dr. Peacock loved travelling. From his earliest childhood he had especially an intense love for the sea. But his journeys, which were frequent, and, even during the failing health of his later years, extended to the shores of the Mediterranean, to North America, and to the Brazils, were always largely spent in adding to his knowledge. He made a point of inspecting all important picture galleries, and of studying architecture and archæology, subjects on which he was well informed ; and, whenever the opportunity offered, he never failed to visit and make notes of hospitals and of hospital practice. Several papers recording the results of such inquiries have appeared from time to time in the medical journals. In his pleasures as in his work, he was alike methodical and earnest.

It is difficult to give an adequate description of Dr. Peacock's personal appearance and private character. To those who did not know him intimately (and he had few intimate friends) he was simply a middle-sized, slim, sandy-haired, homely-looking man, grave and reserved in manner. He was certainly not a demonstrative man, and he took a very serious view of life, its

duties and responsibilities. But he had many fine qualities ; and those who knew him best appreciated these most. He was perfectly conscientious and truthful ; he never spoke against his neighbour, and always recognised and acknowledged the good qualities that those with whom he was brought into contact possessed. He was slow to form opinions, but when he had formed them he adhered to them with great tenacity, yet he was in no sense bigoted ; he was a man of great resolution and courage, and whatever he had determined to do he did it with all his might, in spite of all opposition and all discouragements. Notwithstanding his apparent coldness, no man was kinder or truer-hearted than he ; no man was more capable than he of self-sacrificing generosity ; and few men were really more emotional. He was a warm and faithful friend ; and he loved children. He was deeply religious, but his religion, like everything else about him, was unostentatious ; it formed an essential part of his life, and influenced all his thoughts and actions, but he rarely spoke of his religious views, and always treated the opinions or convictions of others with tenderness and respect. We have said that he loved his profession, but he loved it even more for the good it enabled him to do his fellow creatures than for its scientific interest.

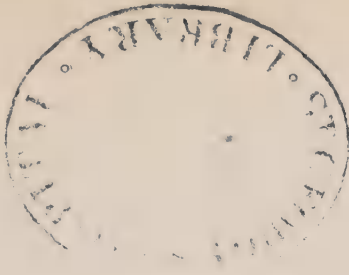
Probably the chief cause of his apparent coldness was the disappointment and sorrow which attended his domestic life. In 1850 he married Cornelia Walduck, a lady of the same persuasion as himself, a devoted, loving wife, who warmly aided him in all his works of charity, and possessed nearly every qualification to make him happy. But she remained childless, and his great longing was to have children growing up around him. She had delicate health, and was on that account a constant source of anxiety to him, and in 1869 died after a brief illness, leaving him a solitary man. Her loss was indeed a grievous loss to him, and he never recovered from it. His loneliness was increased of late years, also, by the fact that most of the medical friends with whom he had been chiefly familiar had left the neighbourhood in which he resided throughout the whole of his London career, either being carried off by death or having migrated to the west. And for the last five years of his life failing health prevented him from availing himself of such opportunities of social intercourse as

still offered themselves. He continued a frequent attendant at the meetings of the Pathological Society, but otherwise his evenings were almost all spent at home, arranging his papers, collecting facts and statistics, or writing articles for the societies or journals.

Dr. Peacock's life was not an eventful one; and it remains only to add: that he was a Fellow (since 1850) of the Royal College of Physicians, and had filled the offices of Senior Censor and Croonian Lecturer; that he and Dr. Wilks were the first appointed Examiners in Medicine to the Royal College of Surgeons; that he was for many years physician to the National Provident and to the Friend's Assurance Companies; that he was a Fellow of the Royal Medical and Chirurgical Society, and a member severally of the Anthropological Institute, the Pathological Society, and the Hunterian Society; that at the time of his death he was Consulting Physician to St. Thomas's Hospital and to the Victoria Park Hospital; that a few years since he received a gold medal from the College of Surgeons for a valuable series of preparations which he had presented to the museum of that institution; that for many years he had a large private practice; and that his name deserves to be held in remembrance, not only for the good work which he did as a hospital physician, teacher, and lecturer, not only for the valuable writings of which he was the author, but fully as much for the facts that he was the founder, and for many years the main support, of the Victoria Park Hospital for Diseases of the Chest; and that, if not the actual founder, he, more than any one else, was instrumental in bringing the Pathological Society of London into existence, and in maintaining its efficiency and reputation. One of his chief sources of pride was his election, not many years before his death, to be its President.

His mortal remains rest beside those of his deeply-mourned, dearly-loved wife, in the quiet "Friends' Burial Ground" at Tottenham.

J. S. B.



REPORT OF
THE OBSTETRICAL DEPARTMENT
FOR 1880.

BY ROBERT CORY, M.D.

THE RESIDENT ACCOUCHEURS FOR THE YEAR WERE MESSRS. C. A. BALLANCE,
HUTTON CASTLE, A. NEWSHOLME, AND J. SHAW.

FROM the 1st of January, 1880, to the 31st of December, 1880, both dates inclusive, 2119 women were attended. Of these, 2097 resulted in single births, 20 in twins, and 2 in triplets. There were 12 cases of abortion among the single births and 2 among the twin cases.

In the following table the presentations of the children are classified :

	Among the 2097 single births.	Among the 20 cases of twins, and 2 cases of triplets.	Total.
Vertex	2042	19	2061
Breech	22	7	29
Superior extremities, includ- ing the shoulder . . .	2	3	5
Head and hand . . .	7	0	7
Inferior extremities . . .	4	10	14
Feet and hands . . .	2	0	2
Face and forehead . . .	6	0	6
Abortions	12	4	16
Not stated	0	3	3
			<hr/> 2143

Of the 2116 cases attended,

330 were 1st labours.		64 were 10th labours.
323 „ 2nd „		33 „ 11th „
325 „ 3rd „		21 „ 12th „
306 „ 4th „		19 „ 13th „
209 „ 5th „		5 „ 14th „
156 „ 6th „		2 „ 15th „
143 „ 7th „		1 was a 16th labour.
110 „ 8th „		
69 „ 9th „		
		2116

In 3 cases the number of confinements is not stated.

The following table shows the number of women confined at each consecutive year of life; the youngest mother being 17, and the oldest 47 years of age.

At the age of.	No. of women confined.	At the age of.	No. of women confined.		
17	...	7	33	...	64
18	...	28	34	...	65
19	...	52	35	...	58
20	...	94	36	...	61
21	...	111	37	...	43
22	...	110	38	...	55
23	...	128	39	...	35
24	...	125	40	...	35
25	...	156	41	...	25
26	...	132	42	...	18
27	...	129	43	...	18
28	...	123	44	...	10
29	...	126	45	...	5
30	...	120	46	...	1
31	...	80	47	...	1
32	...	99			
					2114

In 5 cases the ages of the mothers are not stated.

FORCEPS CASES.

The forceps were used in 83 cases. The reasons for their use may be tabulated as follows :

		{ 14 from contracted pelvis.
		9 „ inertia.
Delay at the brim of the	39	12 „ faulty position of heads.
pelvis		2 „ pendulous abdomen.
		1 „ a large head.
		1 „ rigidity of cervix.
Delay at the outlet	14	
Tedious labours	17	
Delay of after-coming head .	2	
Prolapse of cord	4	
Placenta prævia	1	
Accidental hæmorrhage . .	2	
Large vaginal cystocele . .	1	
General dropsy	1	
No statement	2	
	<hr/> 83	

There were 24 cases of primiparæ among the 83 forceps cases, which gives a percentage of 28·9 ; the percentage of primiparæ among the 2119 cases being 15·5.

Rupture of the perineum took place in 7 of these cases, 3 of which were primiparæ.

In 11 of the cases forceps had been used on former occasions, and in 3 version. One mother died from hæmorrhage.

Of the 83 children delivered with the forceps, 8 were still-born, and 1 had facial paralysis, which passed off in five days.

CASES OF VERSION.

Podalic version was resorted to in 6 cases (among the single births) for the following reasons :

		No. of children stillborn.
Presentation of the superior ex-		
tremities, including the shoulder	3	1
Induced labour	1	1
Prolapsed funis	1	1
Inability to apply the forceps	1	1

Cephalic version was resorted to once for—

				No. of children stillborn.
Placenta prævia	.	.	1	1

One mother died on the fifth day after delivery from septicæmia.

In 5 of the 7 cases the children were stillborn.

PLACENTA PRÆVIA.

There were 3 cases of placenta prævia, the particulars of which are stated below :

No.	Age.	Confinement.	Sex.	Whether placenta prævia was partial or central.	Treatment.	Result to Mother.	Result to Child.
380	40	11th	M.	Central	Separation of placenta; cephalic version; forceps	Good	Stillborn.
1827	25	5th	M.	Partial	Separation had occurred before assistance arrived; foot presented	Ditto	Ditto.
1921	32	12th	M.	Partial?	Placenta was in vagina when attendant arrived; premature child expelled by the natural powers	Ditto	Ditto.

BREECH PRESENTATIONS.

THE BREECH presented in 22 cases among the single births, which gives a proportion of 1 in every 96 births. In 11 of the cases the children were stillborn. 3 of the stillborn children showed signs of intra-uterine maceration.

CASES IN WHICH FERRIC CHLORIDE WAS INJECTED INTO THE UTERUS.

The following table gives the cases in which the uterus was injected with a solution of ferric chloride. They were altogether 6 in number, and the women in 3 cases made good

recoveries. In 3 cases death followed, but the fatal result cannot be attributed in any way to the injection (see cases of maternal deaths at the end of this report).

In all the cases the injection of the iron solution served its purpose immediately except in one, viz. 2134, in which it had to be repeated before hæmorrhage ceased.

In 2 of the cases, viz. 2141 and 427, hot-water injections had at first been ineffectually tried.

The solution used was the *Liquor Ferri Perchloridi Fortior* of the British Pharmacopœia, and the strength mentioned in the table refers to this as mixed with water in the proportion named.

No.	Age.	Confine- ment.	Date.	Complications.	Result to mother.	Strength of solution.	Reasons for employment.
2169	28	6th	Jan. 3	None	Death	1 in 5	Severe hæmorrhage.
2134	36	9th	Jan. 8	Pre-partum hæmorrhage ; forceps	Ditto	„	Ditto.
2141	33	7th	Feb. 8	Vaginal cysto- cele ; forceps	Recovery	„	Ditto.
25	30	5th	Mar. 9	None	Melancholia ; ultimate re- covery	1 in 6	Ditto.
292	43	9th	Mar. 30	Twins	Death	„	Ditto.
427	28	3rd	May 10	Forceps	Recovery	„	Ditto.

The strong solution of ferric chloride was also used in 2 other cases on a swab, to stay hæmorrhage proceeding from the lacerated cervix uteri. In both cases effectually.

HOT-WATER INJECTIONS into the uterus at temperatures varying from 115° Fahr. to 120° Fahr. were used in 11 cases for the purpose of arresting hæmorrhage. They were successful in 9 cases, but failed in two.

MATERNAL DEATHS.

Five maternal deaths occurred during the year, or ·236 per cent. The following table gives an outline of the cases. They will be found more fully given at the end of this report.

No.	Age.	Confinement.	Sex.	Result to child.	Causes of death.	Date of confinement.	Date of death.
2162	30	7th	M.	S. B.	Septicæmia	March 10	March 12.
2169	28	6th	M.	L.	Post-partum hæmorrhage	Jan. 3	Jan. 3.
2134	36	9th	M.	S. B.	Pre- and post-partum hæmorrhage	Jan. 8	Jan. 8.
292	43	9th	{ M. F.	{ S. B. L.	{ Case of twins; post-partum hæmorrhage	March 30	March 30.
1357	27	1st	{ M. F. F.	{ L. L. L.	{ Case of triplets; septicæmia	July 31	August 4.

OF THE CHILDREN.—The number of births among the 2119 women attended during the year was 2143; there being 20 cases of twins, and 2 cases of triplets. Of these, 1107 were males and 1026 were females; the sex of 10 of the children is not stated.

Among these there were 95 cases of stillbirths, being in the proportion of 1 stillbirth in 23·35 cases, or 4·48 per cent.

The characters of the labours in which they occurred are given below :

Natural labours	22
Intra-uterine maceration	16
Abortions	16
Premature births	7
Uncomplicated forceps cases	3
Presentations of upper extremities	1
Presentations of lower extremities	3
Breech presentations	8
Plural births	8
Placenta prævia	1
Accidental hæmorrhage	4
Prolapse of cord	3
Version for contracted pelvis	1
Craniotomy	2
	<hr/> 95

Besides the stillbirths 23 children are reported as dying during the first week of their life.

PLURAL BIRTHS.

The following tables give particulars of the cases of twin and triplet births :

Twins.

No.	Age.	No. of confinements.	Date of birth.	Sex.		Result to mother.	Result to Child.		Presentations.		Condition of placenta.
				1st.	2nd.		1st.	2nd.	1st child.	2nd child.	
2104	39	6	Jan. 3	M	M	R	L	L	Head	Head	Separate.
2041	27	6	Feb. 15	M	M	R	L	L	Ditto	Breech	Single.
479	31	2	March 12	M	M	R	L	L	Ditto	Ditto ¹	Ditto.
114	21	1	March 22	F	F	R	L	L	Ditto	Feet	Ditto.
292	43	9	March 30	F	M	D	L	D	Breech	Right knee.	Ditto.
944	36	14	May 10	M	M	R	D	D	—	— ²	Separate.
1041	40	10	June 11	M	F	R	L	L	Head	Breech	Ditto.
697	42	9	June 27	M	M	R	L	D	Ditto	Feet	Single.
1053	20	2	July 17	M	F	R	L	L	Ditto	Ditto	Separate.
1238	22	5	July 25	M	M	R	L	L	Ditto	Head	Ditto.
1451	34	8	Aug. 24	F	F	R	L	L	Ditto	Feet	Single.
1294	26	4	Aug. 30	F	F	R	L	L	Ditto	Hand	Ditto.
1359	31	4	Sep. 10	F	F	R	L	L	Ditto	Feet	Separate.
1819	30	6	Sep. 30	M	M	R	L	D	Breech	Shoulder	Ditto.
1690	36	6	Oct. 19	F	M	R	L	L	Ditto	Breech	Single.
1969	19	1	Oct. 27	M	M	R	D	D	Premature	5 months ³	—
1781	34	7	Nov. 5	M	F	R	L	D	Feet	Feet	Single.
1578	25	5	Nov. 26	F	F	R	L	L	Head	Ditto	Separate.
1995	37	3	Dec. 25	M	M	R	L	L	Ditto	Ditto	Ditto.
2379	35	9	Dec. 25	M	M	R	D	D	?	?	Single.

Triplets.

No.	Age.	No. of confinements.	Date of birth.	Sex.			Result to mother.	Result to children.			Presentations.			Condition of placenta.
				1st.	2nd.	3rd.		1st.	2nd.	3rd.	1st child.	2nd child.	3rd child.	
1357	27	1	July 31	M	F	F	D	L	L	L	Shoulder	?	Head	No statement.
1953	41	9	Nov. 24	F	F	F	R	D	D	L	Head	Head	Ditto	Ditto.

¹ Premature (seven months); both children died same day.

² Abortion (four months and a half).

³ Abortion (5 months).

The placentæ of the twin births were separate in 9 cases, single in 10; in 1 the condition is not stated.

The condition of the placentæ of the triplet births is not stated.

The twin children were—

In 10 cases, both males;
 „ 5 „ „ females;
 „ 5 „ male and female.

The triplet children were—

In 1 case, 1 male and 2 females;
 „ 3 females.

Malformations.

Five cases of malformation are reported.

No.		Sex.		Malformation.
1990	...	F.	...	Harelip.
2048	...	M.	...	Harelip and cleft palate.
133	...	M.	...	Cleft palate.
616	...	M.	...	Absence of inter-auricular septum.
1581	...	M.	...	Spina bifida.

The case of absence of the inter-auricular septum was one of considerable interest, on account of the following history:

The child lived ten hours, and died with symptoms of asphyxia, jaundice, and vomiting bloody mucus. The jaundice was general, and the conjunctivæ were strongly tinted.

On examining the body after death it was found to measure 471 mm. ($18\frac{1}{2}$ inches), and to weigh 2800 grms. (6 lbs. $2\frac{3}{4}$ oz.).

The *heart* was large, it weighed 33.1 grms., whereas the normal weight of the heart of a new-born child of the above size is about 17 grms. There was no septum between the auricles.

The *liver* was large, and of a dark chocolate colour. The bile-ducts were patent. The common bile-duct measured 37 mm., and blue fluid, when injected into it, flowed freely, first into the gall-bladder and then through the bile-ducts into the liver.

The *spleen* weighed 45.9 grms., a weight at least three times greater than normal.

The other organs, viz. lungs, kidneys, and thymus, were of average weight, and apparently healthy.

The mother is the second wife of her husband. She has had one other child born at full time, which lived twenty-eight hours and died jaundiced, and with other symptoms similar to the second child; she has also had a miscarriage at the second month, between the births of these children. She has not suffered from any symptoms referable to heart disease, but she has a distinct blowing endocardial systolic murmur, to be heard over the region of the pulmonary valve and down the left side of the sternum.

The husband has served in the army. He has no heart murmur. By his first wife he had eight children, all of whom survived their births and were healthy. Two are still living, the others died abroad of scarlet fever, sunstroke, &c.

Cases of Maternal Deaths.

2162. She had been in labour for thirty-six hours. Ergot had been given, and the long forceps applied ineffectually. The resident accoucheur then turned the child, and delivery was by this means soon accomplished.

Shortly after this the woman had a strong rigor, followed by high temperature, delirium, and vomiting. She rapidly grew worse. The pulse became quick and feeble. There was slight pain in the right iliac fossa.

The uterus was washed out with a solution of Condyl's fluid, but the patient died at 7.30 p.m. on the 12th March, forty-eight hours after her delivery.

2169. S. J—, æt. 28, was confined about 5 a.m. on the 3rd of January, 1880, of a living male child, after a natural labour. It was her sixth confinement. Post-partum hæmorrhage came on two or three hours after delivery. A large quantity of blood was lost before any assistance could be obtained. As soon as the resident accoucheur arrived he, at 8 a.m., injected, after removing clots from the uterus, a solution of perchloride of iron (1 in 5), which at once arrested the hæmorrhage. By this time, however, the woman had first lost vision and then became unconscious; she afterwards revived a little. Dr. Cory was sent for, and on his arrival he determined to try transfusion of blood.

Roussel's apparatus was adjusted to the arm of the blood-giver, and the patient, who was lying on her left side, was gently turned over on her back, to facilitate the opening of her vein, but before the latter was done the patient had a strong convulsive seizure, affecting all parts of the body—at first tonic and then clonic; features distorted, edges of mouth drawn, eyes staring, legs extended and rigid, arms slightly bent; duration, two minutes. An incision was then made over one

of the veins of her forearm, but before it could be opened the patient was breathing her last irregular respirations. She died in less than two minutes.

2134. A. W—, æt. 36, was confined on the 8th of January, 1880, of a stillborn male child. It was her ninth confinement, and she considered herself about seven months pregnant. The resident accoucheur was first called to the case on the 7th of January, by the obstetric clerk, in consequence of pre-partum hæmorrhage. He examined the patient by passing his hand into the vagina; the os was sufficiently open to admit one finger. He could feel no placenta. As the bleeding had quite ceased, and had never been serious he applied a binder firmly over the uterus, gave one grain of opium, ordered all nourishment to be taken cold, and ten grains of gallic acid to be taken every four hours. He also left instructions that if the bleeding returned a message should be sent at once to the hospital.

Jan. 8th, 6 a.m., he was called again. On his arrival he found the patient blanched, lips colourless, extremities cold, pulse 130, at times running and imperceptible, frequently fainting, vomiting all food, and blood steadily flowing from vulva. He was then informed that the bleeding had been going on since 10 p.m. the previous evening, and no explanation could be given by the nurse as to why she had not sent for assistance earlier. The amount of blood lost was very great.

As the os was still in the same condition, the membranes were ruptured and the binder firmly applied. This stopped the hæmorrhage. Barnes' bags were used for the purpose of dilating the cervix, forceps applied, and the child delivered in about forty minutes from the time when the first bag was introduced. The placenta was found to have been completely detached.

As hæmorrhage continued a solution of perchloride of iron (1 in 4) was injected, and the bleeding thereby checked, but as it was not absolutely arrested a fresh quantity of the same solution was injected. After this there was no bleeding whatever. Dr. Cory was sent for as the patient was apparently sinking. He tried transfusion, but the apparatus (Dr. Roussel's) became immediately clogged, and before it could be cleared the patient had expired.

292. E. E—, æt. 43, was confined on the 30th of March of twins (female and male). The breech of the first child, which proved to be a female, and the right knee of the second child, which proved to be a male, presented.

Shortly after the birth of the first child the woman fainted, so that the delivery of the second was expedited. A great quantity of blood immediately followed after the birth of the second child; the placenta was therefore removed at once, and hot water injected into the uterus. This failed to stop the hæmorrhage. Perchloride of iron was then used with good effect; the woman, however, did not rally; she had convulsive seizures, and became unconscious. Dr. Cory was sent for, and on his arrival, ten minutes after the message was despatched, he found that the woman had already been dead three minutes.

1357. B. C—, æt. 27, was confined on the 31st of July, 1880, of three living female children. The shoulder of the first child presented, it was turned and delivered; the second child was also turned and delivered; and the third child

was delivered by the forceps. The mother had septicæmia, and died on August 4th.

Cases of Craniotomy.

919. Mrs. T—, æt. 34, was confined on the 29th of August, 1880. It was her seventh confinement. Labour had commenced twenty-four hours previously, and although the cervix rapidly dilated no advance was made. The forceps were used by the resident accoucheur, but without avail. Dr. Cory was sent for, and he reapplied the forceps with no better result; he therefore performed craniotomy in the usual way, using the craniotomy forceps as extractors. The child was a male.

History.—The woman had been married ten years. Her statements concerning her former confinements were as follows :

1st confinement, in labour 1 week, child stillborn.

2nd ,, ,, 3 days, ,, delivered with forceps.

3rd ,, ,, 1 week, ,,

4th ,, a miscarriage at the 7th week.

5th ,, in labour 4 days, child stillborn.

6th ,, a miscarriage at the 3rd month.

The woman made a good recovery.

1368. M. C—, æt. 22, was confined on the 11th of November, 1880. It was her first confinement. When the obstetric clerk arrived he found that the funis was prolapsed and pulseless; he therefore sent for the resident accoucheur, who, failing to replace the cord, further dilated the cervix with Barnes' bags, and then applied the forceps, but without avail. Dr. Cory was then sent for, and he, finding the conjugate diameter only about three inches, the result of rickets, at once performed craniotomy. The child, a small female, was easily extracted with the craniotomy forceps. The woman made a good recovery.

MEDICAL AND SURGICAL REPORTS.

MEDICAL REPORT.

1880.

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MEDICAL REGISTRAR.

PREFACE.

BUT little alteration has been made in the present Report from that of previous years. The extended column of age has been continued, but it has not been attempted to give the duration of each patient's illness before admission, as it was found impossible, in the great majority of cases, to determine this with any accuracy. The special tables have been continued as in previous years. Two of these, showing the complications of acute rheumatism and the causation and complications of chorea respectively, have been added in consequence of a resolution which was passed at a meeting of the Association of Registrars to the London Hospitals. The nomenclature of the College of Physicians has been for the most part adhered to.

TABLE I.—*General Medical Statement.*

Number of Medical Beds ...	...	...	...	...	191
			Males.	Females.	Total.
Number of patients in Medical Wards, Jan. 1st, 1880 ...	62	...	73	...	135
„ „ admitted during the year 1880 ...	737	...	806	...	1543
		
Total ...	799	...	879	...	1678
„ „ in Medical Wards, Dec. 31st, 1880 ...	70	...	87	...	157
„ „ treated to a termination during 1880	745	...	820	...	1565
„ „ discharged or died during 1880:					
	Males.	Females.	Total.	Rate per cent.	
Cured ...	282	375	657	...	41·99
Relieved ...	262	247	509	...	32·52
Unrelieved or other causes ...	57	83	140	...	8·95
Died ...	144	115	259	...	16·54

Total ...	745	820	1565	...	100·00

Average number of days of each patient's stay in hospital—37.

7. Cystitis .	1	1	...	...	1	...	...	...	...
8. Abscesses .	1	1	...	...	1	...	...	...	...
9. Necrosis of jaw .	1	1	...	1	...	...	...	...	...
10. Otorrhœa .	1	1	...	1	...	...	...	...	...
11. Delirium and convulsions .	1	1	...	...	1	...	...	...	...
Febriacula .	14	13	1	1	2	7	4	...	15
Intermittent .	2	1	1	...	...	1	1	...	15
Erysipelas .	7	4	3	...	2	3	2	...	30
Pyæmia .	3	1	2	...	1	1	1	...	...
Diphtheria and croup .	18	12	6	11	5	...	2	...	31
Diphtheritic paralysis .	1	1	...	...	...	...	1	...	137
Fever (?) .	2	2	...	...	2	...	...	...	...
Acute rheumatism .	118	54	64	...	6	39	36	23	12
Sub-acute rheumatism .	9	6	3	...	...	6	2	...	1
Chr. rheumatic arthritis .	13	8	5	...	...	4	3	3	1
Gonorrhœal rheumatism .	3	2	1	...	...	2	1	...	2
Synovitis .	3	...	3	...	1	1	...	1	...
Lumbago .	4	3	1	...	...	1	...	3	...
Gout .	10	10	...	...	...	4	4	1	1
Syphilis .	1	1	...	1	...	...	...	...	...
Rickets .	1	1	...	1	...	...	...	...	...
Cretinism .	2	1	1	...	1	1	...	...	...
Myxœdema .	2	...	2	...	...	...	1	...	...
Diabetes .	4	1	3	...	...	1	1	...	2
Purpura hæmorrhagica .	1	...	1	...	...	1	...	...	...
Anæmia and chlorosis .	16	4	12	...	...	5	5	4	2
Leucocythæmia .	2	1	1	...	...	...	1	...	...
Lymphadenoma .	3	3	...	3	...	...	...	...	...
General tuberculosis .	8	5	3	6	...	1	1	...	...
Purpura hæmorrhagica .	1	...	1	...	...	...	1	...	...
Anæmia and chlorosis .	16	4	12	...	...	5	5	4	2
Leucocythæmia .	2	1	1	...	...	...	1	...	...
Lymphadenoma .	3	3	...	3	...	...	...	...	...
General tuberculosis .	8	5	3	6	...	1	1	...	...

Phthisis	69	39	30	1	2	17	20	17	9	3	...	22	44	...	18	8	3	7	18	15	4 on right side, 2 on left; all probably dependent on phthisis. The fatal case was double, with great effusion of plastic lymph.
Pneumothorax	6	6	...	...	...	...	1	5	...	...	...	69	12	...	...	...	4	...	2	...	
Pleurisy with effusion	25	18	7	...	...	6	11	5	2	1	...	40	3	17	4	3	...	1	...	...	In the female case there was cancer of glands at base of lung; the male probably syphilitic.
Empyema	7	5	2	...	2	2	1	1	1	...	...	112	40	2	2	...	...	3	...	...
Dry pleurisy	11	6	5	...	2	7	...	2	...	...	...	15	...	6	3	2	...	...	...	...
Intra-thoracic tumour	2	1	1	...	...	...	...	...	1	1	...	27	8	1	...	...	...	...	...	1	
IV. DISEASES OF ORGANS OF CIRCULATION.																					
Pericarditis	3	1	2	...	...	...	...	...	1	1	1	26	10	...	2	...	...	...	1	...	In fatal case 3 pints of pus in pericardium, also pleurisy and cirrhosis of liver.
Cardiac hypertrophy	1	1	...	...	...	...	...	1	...	...	...	24	...	...	...	...	...	...	...	...
" malformation	4	1	3	...	1	2	...	1	...	...	...	22	...	...	1	3	...	...	...	...
" valvular disease	104	51	53	...	3	18	27	23	21	9	3	36	27	...	40	28	4	7	7	18	
1. Aortic and mitral	29	15	14	...	...	7	8	6	5	2	1	...	...	...	14	8	...	...	1	6	
2. Mitral	58	23	35	...	3	10	16	13	10	4	2	...	...	...	18	18	2	5	3	12	
3. Aortic	17	13	4	...	...	1	3	4	6	3	...	...	...	...	8	2	2	2	3	...	
Thoracic aneurysm	12	9	3	...	...	...	...	...	5	4	2	76	74	...	6	2	...	...	3	1	1 a readmission.
Abdominal aneurysm	6	5	1	...	...	...	...	...	1	4	...	85	13	...	1	1	...	...	4	...	1 a readmission, 2 died from obstruction of aorta by thrombus and one from rupture of sac.
Degeneration of aorta	4	3	1	...	...	...	...	...	1	1	1	10	20	...	...	1	1	...	2	...	In fatal cases dilatation and atheroma of arch of aorta.
Angina pectoris	1	1	...	...	...	...	...	...	...	...	1	10	...	...	...	1	...	...	...	...	Probably dependent on aneurysm.
V. DISEASES OF DUCTLESS GLANDS.																					
Gâitre	1	...	1	...	...	...	...	...	1	...	...	...	40	...	...	...	...	...	...	1	Fatal from compression of trachea.
Graves's disease	1	1	4	...	...	...	3	2	...	...	...	30	5	...	1	3	...	...	...	1	1 died from compression of trachea.
Addison's disease	2	1	1	...	2	...	...	...	...	...	...	...	18	...	...	...	...	1	1	...	Tubercle in lungs and supra-renals in both; in 1 no bronzing of skin, this died in an epileptic fit.
Enlarged spleen	2	1	1	...	1	...	...	...	...	...	1	20	30	...	1	...	...	...	...	1	In fatal case general œdema.

TABLE II—continued.

DISEASE.	Number of cases.		Age.							Average number of days in hosp.		Cured.	Re- lieved.		Unre- lieved.		Died.	REMARKS.	
	Total.	M. F.	Under 5	5-10	10-20	20-30	30-40	40-50	50-60	Over 60	Cases.		M. F.	M. F.	M. F.	M. F.			
											Not fatal.	Fatal.							
VII. DISEASES OF GENITO- URINARY ORGANS— <i>continued.</i>																			
Hæmaturia	2	2	1	1	31	...	2	1	Paroxysmal. 1 complicated with surgical kidney.
Hæmatinuria	1	1	...	...	...	1	...	...	...	...	40	...	1	...	...	...	...	...
Chyluria	1	1	...	...	...	1	...	...	...	...	37	...	1	...	...	...	...	...
Cystitis	2	2	...	...	...	1	1	...	...	...	51	...	1	...	...	...	...	...
Cancer of bladder	1	1	...	...	...	...	1	...	...	...	180	...	1	...	...	...	...	...
VIII. DISEASES OF THE NER- VOUS SYSTEM.																			
Simple meningitis	1	1	1	7	1	Intense inflammation with effusion of lymph principally in ventricles. In 1 tubercle of membranes of brain solely; 1 associated with cystitis and surgical kidneys. 10 right, 15 left. In the child post-scarlatinal. No P.M. in fatal cases. In 1 embolism of arteria cent. retinæ during life, the other probably due to hæmorrhage. In 1 into right, in 2 into left ventricle. 3 on right; 2 on left side. In one M. cordis with embolism of mid. cerebral artery. In fatal case abscess of cerebellum due to necrosis of petrous bone; 1 recovered after well-marked symptoms.
Tubercular meningitis	7	5	2	...	2	2	3	...	...	...	...	15	...	...	...	...	...	2
Hemiplegia	25	20	5	1	...	...	8	6	5	5	59	8	3	15	5	...	2	...
Cerebral hæmorrhage	3	2	1	...	...	...	...	1	1	1	...	4	...	...	...	...	2	1
Cerebral softening	5	3	2	...	...	1	1	1	1	1	...	23	...	...	...	...	3	2
Cerebral abscess	2	2	...	...	1	...	1	...	...	...	74	2	1	...	...	...	1	...

Cerebral tumour	9	3	6	2	1	2	1	2	1	1	1	19	46	...	1?	...	1	3	4	Case (?) cured had double optic neuritis and ptosis; 1 went at her own desire.
Disease of pons Varolii	1	1	...	...	...	...	1	...	...	...	...	54	...	1	...	...	...	...	Left facial paralysis; right facial anæsthesia, and inability to swallow.
General paralysis	11	11	...	...	...	...	9	2	...	...	...	21	...	?1	...	10	...	...	1 a readmission; 1 a hospital porter apparently cured.
Mental derangement	9	6	3	...	...	...	3	1	1	1	3	13	...	...	...	6	3	...	1 was a readmission, 2 were combined with idiocy, 1 ? Meniere's disease.
Cephalagia	5	4	1	...	1	...	2	2	...	...	9	...	...	4	1	...	...	...	The symptoms various; aphonia, dysphagia, hemianæsthesia, amaurosis, convulsions, &c.
Epilepsy	22	17	5	1	1	6	4	1	...	3	16	...	...	...	...	1	75	...	1 was a readmission, 2 were combined with idiocy, 1 ? Meniere's disease.
Hysteria	34	4	30	...	14	11	4	4	1	...	33	...	...	...	...	4	30	...	The symptoms various; aphonia, dysphagia, hemianæsthesia, amaurosis, convulsions, &c.
Chorea	23	4	19	...	3	20	...	...	...	...	25	...	10	3	13	1	5	...	1 The fatal case aged 19; there was found P.M. congestion of the brain, and vegetations on mitral valve.
Choreiform movements	1	1	...	...	...	...	1	...	...	...	15	...	...	...	...	1	...	...
Paralysis agitans	2	1	1	...	...	...	2	...	...	...	23	...	...	...	...	1	...	...
Spasmodic torticollis	2	2	...	...	...	...	...	...	...	2	50	...	...	...	...	1	...	...
Hydrophobia	1	1	...	...	...	...	...	...	1	...	...	...	3	...	...	...	...	1	No naked eye changes obvious P.M. An idiopathic case.
Tetanus	1	1	...	...	1	...	...	...	...	...	52	...	...	1	...	...	...	...
Pleurodynia	4	2	2	...	3	1	...	...	...	...	13	...	...	2	2	...	...	...
Sciatica	10	7	3	...	...	1	2	4	2	1	19	...	...	3	1	4	2	...	
Facial neuralgia	3	...	3	...	...	1	1	1	...	...	17	...	...	...	2	...	1	...	
Paraplegia	24	14	10	1	1	1	1	1	6	3	1	83	59	2	...	10	9	...	2	In 2 fatal cases there was softening of the cord without evident cause; in 1 caries of vertebrae, and of bones of skull.
Locomotor ataxy	4	3	1	...	...	...	2	...	2	...	28	...	...	...	...	3	1	...	
Disseminated sclerosis	8	5	3	...	1	...	1	...	5	1	32	...	...	...	...	5	3	...	
Progressive muscular atrophy	4	4	...	...	...	...	2	...	...	...	46	...	...	...	...	4	...	...
Infantile paralysis	2	1	1	...	2	...	...	...	...	...	30	...	...	...	...	1	...	...
Adult spinal paralysis	2	...	2	...	...	1	1	...	...	...	24	...	...	...	...	2	...	...
Paralysis of 7th nerve	3	2	1	...	1	...	1	...	...	1	21	...	...	...	...	2	1	...	In 1 due to disease of middle ear.
" 3rd "	1	1	...	...	...	...	1	...	...	...	18	...	...	...	...	1	...	...

TABLE II—*continued*

DISEASE.	Number of cases.		Age.							Average number of days in hosp.		Cured.		Re- lieved.		Unre- lieved.		Died.	REMARKS.	
	Total.	M. F.	Under 5	5-10	10-20	20-30	30-40	40-50	50-60	Over 60	Cases.		M.	F.	M.	F.	M. F.			
											Not fatal.	Fatal.								
VIII. DISEASES OF THE NERVOUS SYSTEM—continued.																				
Paralysis of 9th and 6th nerve	1	1	1	...	...	...	...	...	1	...	...	17	...	...	...	1	...	...	...	Due to a malignant tumour in neck.
Sympathetic (?)	1	1	1	...	...	...	...	...	1	...	...	10	...	...	...	1	...	...	...	Due to an injury.
Median	1	1	1	...	...	...	...	...	1	...	...	24	...	...	...	1	...	...	...	? Post diphtheritic.
Cellulitis of orbit	1	1	1	...	1	...	...	...	...	...	...	16	...	...	1	...	...	...	...
Sub-conjunctival hæmorrhage	1	1	1	...	1	...	...	...	...	...	...	8	...	...	1	...	...	...	...	Probably due to a fit.
Chronic otitis	2	2	2	...	...	...	...	...	...	...	...	13	...	...	...	2	...	...	...	In one probably post scarlatinal.
IX. POISONING.																				
Nitric acid	1	1	1	...	...	...	1	...	...	...	...	7	...	...	1	...	...	...	...	Erosion of œsophagus and stomach.
Sulphuric acid	1	1	...	...	...	...	...	...	...	1	...	...	2	...	...	...	...	...	1	
Hydrochloric acid	1	1	...	...	...	1	...	...	...	...	...	12	...	1	...	...	...	...	...
Phosphoric acid	1	1	...	...	...	...	...	...	...	1	...	5	...	1	...	...	...	...	...
Lead	1	1	...	...	...	...	...	1	...	...	...	46	...	...	1	...	...	...	...	Drop wrist.
Mercury	2	2	...	...	...	1	1	...	...	...	...	5	...	2	...	...	...	...	...	2 re-admissions.
Opium	4	4	...	...	...	...	3	...	1	...	...	7	...	4	...	...	...	...	...	1 by belladonna liniment; 1 by liq. atropiæ.
Atropia	2	2	1	...	...	...	...	...	1	...	...	6	...	2	...	...	...	...	...
Alcohol	13	10	3	...	...	1	7	4	1	...	...	17	10	3	...	4	1	1	2	1
X. IMMERSION.																				
	5	4	1	...	1	...	...	...	...	...	4	4	3	4	...	...	...	...	1	4 suicidal, 1 accidental: œdema of lungs in fatal case.
XI. MISCELLANEOUS																				
	7	1	6	...	2	3	1	1	...	...	...	5	...	1	6	...	...	...	...

XII. FEMALE GENERATIVE
ORGANS.1. *Uterus.*

Amenorrhœa	6	6	2	3	1	14	3	3	25	In 1 case there was a floating kidney.
Menorrhagia	5	5	1	4	1	17	3	2	4	
Mal-development	2	2	1	1	1	27	2	2	1	
Stenosis of os	1	1	1	1	1	15	1	1	1	
Stenosis of cervix	1	1	1	1	1	12	1	1	1	
Elongation of cervix	1	1	1	1	1	24	1	1	1	
Endometritis and endo- cervicitis	25	25	2	14	8	31	15	25	2	
Parametritis	19	19	1	11	6	32	5	4	2	
Pelvic abscess.	8	8	5	2	1	70	5	1	2	

Retro-uterine hæmatocele

Prolapsus uteri	2	2	2	2	2	45	1	3	1	
Anteflexion	3	3	1	2	1	30	7	7	7	
Retroflexion	7	7	1	4	2	20	9	9	9	
	9	9	4	4	1	32	1	1	1	

Retro-latero-flexion.

Anteversion	1	1	1	1	1	25	2	2	2	
	2	2	1	1	1	60	1	1	1	

Retroversion

Sub-involution	1	1	1	1	1	40	1	1	1	
Uterine polypus	3	3	2	1	1	10	3	3	3	
Uterine fibroid	3	3	3	3	3	7	2	2	2	
	9	9	1	4	3	1	7	7	7	

Carcinoma

	19	19	1	5	5	27	7	12	1	
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2. *Ovaries.*

Ovaritis	4	4	1	1	1	18	3	1	1	
Ovarian tumour	6	6	1	1	1	15	4	2	2	
Malignant disease	1	1	1	1	1	25	1	1	1	

Mania developed itself in one.
2 transferred to surgical ward.
Secondary disease of peritoneum.

TABLE II—*continued.*

DISEASE.	Number of cases.		Age.								Average number of days in hosp.		Cured.		Re-lieved.		Unre-lieved.		REMARKS.
	Total.	M. F.	Under 5	5-10	10-20	20-30	30-40	40-50	50-60	Over 60	Cases.		M. F.	M. F.	M. F.	M. F.	M. F.		
											Not fatal.	Fatal.							
XII. FEMALE GENERATIVE ORGANS—continued.																			
3. <i>Vagina.</i>																			
Vaginitis . . .	2	2	2	...	...	...	2	...	...	...	19	...	2	...	...	...	...	...
Imperforate hymen . .	1	1	1	...	1	...	...	...	...	...	45	...	1	...	...	...	...	...
Cystocele . . .	1	1	1	...	...	...	...	...	1	...	30	...	...	...	1	...	...	...
Vagino-vesical fistula .	2	2	2	...	...	1	1	...	...	...	110	...	1	...	1	...	...	...
Epithelioma . . .	1	1	1	...	...	...	1	...	...	...	23	...	...	...	...	...	1	...	
4. <i>Accidents of Pregnancy.</i>																			
Gravid uterus . . .	1	1	1	...	...	...	1	...	...	...	7	...	...	...	1	...	...	...
Induction of premature labour . . .	1	1	1	...	...	1	...	...	...	...	...	3	...	...	...	...	...	1	For convulsions. P.M. the kidneys were found to be contracted granular.
Menorrhagia after abortion . . .																			
Retroversion of gravid uterus . . .	6	6	6	...	...	2	4	...	...	...	13	...	...	5	...	1	...	...	In 1 also sub-involution.
Hydrorrhœa gravidorum .	2	2	2	...	...	...	1	...	...	...	20	...	...	2	...	...	...	...
Phlegmasia dolens . . .	1	1	1	...	...	...	1	...	...	...	3	...	...	1	...	...	...	...	Natural labour at term.
Ruptured perinæum . .	1	1	1	...	...	...	1	...	...	...	25	...	...	1	...	...	...	...	Of right leg.
	5	5	5	...	...	3	2	...	...	...	32	...	...	...	3	...	2	...	

TABLE III.—Cases of Infectious Diseases originating in Hospital.

Initials.	Sex.	Age.	Disease for which admitted.	Disease originating in hospital.	Date of attack.	Result.	Remarks.
L. P.	F.	26	.	Rötheln .	Nov. 23, 1880	C. Dec. 6, 1880	Nurse in hospital.
E. S.	M.	5	Ichthyosis .	Measles .	Dec. 14, 1879	C.	Victoria Ward. Went back. Discharged May 5.
E. P.	F.	2½	Hip disease .	Ditto .	Dec. 15, 1879	C. Jan. 22, 1880	From Victoria Ward.
W. F.	M.	4	Genu valgum .	Ditto .	Dec. 16, 1879	C. Jan. 11, 1880	Ditto.
C. B.	M.	4	Do. .	Ditto .	Dec. 17, 1879	C. Jan. 7, 1880	Ditto.
A. D.	F.	3	Surgical (?) .	Ditto .	Dec. 31, 1879	C. Jan. 8, 1880	Ditto.
J. B.	M.	5½	Do. .	Varicella .	April 24, 1880	C. May 9	Ditto.
P. D.	M.	4	Do. .	Scarlet fever .	Nov. 30, 1879	C. Jan. 13, 1880	From Edward Ward.
L. B.	F.	4	? Stone in bladder .	Ditto .	Nov. 30, 1879	C. Jan. 14, 1880	From Victoria Ward.
— S.	F.	—	Heart disease .	Ditto .	Jan. 25, 1879	C. Mar. 10, 1880	Nurse in hospital.
F. B.	M.	20	Disease of ilium .	Ditto .	Feb. 16, 1880	C. April 23, 1880	From George Ward.
G. G.	M.	11	.	Ditto .	April 7	C.	From Leopold Ward. Went back.
A. F.	F.	15	Chorea .	Ditto .	May 12	C. June 24	From Christian Ward.
E. B.	F.	25	.	Ditto .	August 25	C. September 12	Maid in fever wards.
M. C.	F.	22	.	Typhus .	Nov. 16, 1879	C. Feb. 17, 1880	Nurse in hospital. Had been attending a typhus case.
M. A. V.	F.	35	.	Ditto .	Dec. 30, 1879	C. Feb. 14, 1880	Nurse. Had attended previous case in Charity Ward.
A. H.	F.	22	.	Diphtheria .	Oct. 30, 1880	C. Nov. 11, 1880	Had been nursing a case of diphtheria in hospital.
A. L.	F.	27	.	Facial erysipelas .	Dec. 10, 1879	C. Jan. 6, 1880	Nurse in hospital.
H. M.	M.	6	Phthisis .	Pyæmia .	March 20	D. April 1st	Symptoms set in shortly after exploratory puncture of chest.

TABLE IV.—*Showing the relative frequency of the various complications of Acute Rheumatism in the first, second, and third, or later attack.*

ACUTE RHEUMATISM.	Total.	Dis-charged.		Died.		Under 5	5-10	10-20	20-30	30-40	40-50	50-60	Over 60	Per cent.
		M.	F.	M.	F.									
Total of cases . . .	118	54	64	...	...	...	6	39	36	23	12	2	...	...
1st attack . . .	63	24	39	...	...	...	4	24	15	11	8	1	...	53·2
2nd „ . . .	32	17	15	...	...	...	2	13	12	5	...	...	...	27
3rd „ . . .	23	13	10	...	...	...	...	2	9	7	4	1	...	19·5
<i>Heart :</i>														
Normal . . .	42	...	...	...	...	...	...	...	...	...	...	...	...	34
1st attack . . .	25	11	14	...	...	...	1	9	6	5	3	1	...	39·8
2nd „ . . .	9	5	4	...	...	...	...	2	5	2	...	...	...	28
3rd „ . . .	8	6	2	...	...	...	...	...	3	3	1	1	...	34·7
Transient murmur . . .	9	...	...	...	...	...	...	...	...	...	...	...	...	7·6
1st attack . . .	4	1	3	...	...	...	...	2	2	...	...	...	...	6·3
2nd „ . . .	5	2	3	...	...	...	1	2	1	1	...	...	...	15·6
3rd „ . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Pericarditis . . .	33	...	...	...	...	...	...	...	...	...	...	...	...	27·8
1st attack . . .	19	7	12	...	...	...	1	6	6	5	1	...	...	30
2nd „ . . .	9	5	4	...	...	...	1	4	3	1	...	...	...	28
3rd „ . . .	5	3	2	...	...	...	...	1	4	...	...	...	...	21·6
Mitral regurgitation . . .	53	...	...	...	...	...	...	...	...	...	...	...	...	44
1st attack . . .	24	10	14	...	...	...	3	12	3	3	3	...	...	38
2nd „ . . .	16	9	7	...	...	...	1	9	5	1	...	...	...	50
3rd „ . . .	13	5	8	...	...	...	...	2	5	3	3	...	...	56·5
Mitral obstruction . . .	7	...	...	...	...	...	...	...	...	...	...	...	...	5·9
1st attack . . .	1	...	1	...	...	...	...	...	...	1	...	...	...	1·6
2nd „ . . .	2	1	1	...	...	...	...	2	...	...	...	...	...	6·3
3rd „ . . .	4	2	2	...	...	...	...	...	3	1	...	...	...	17·3
Aortic regurgitation . . .	7	...	...	...	...	...	...	...	...	...	...	...	...	5·9
1st attack . . .	1	...	1	...	...	...	...	1	...	...	...	...	...	1·6
2nd „ . . .	2	1	1	...	...	...	...	2	...	...	...	...	...	6·3
3rd „ . . .	4	3	1	...	...	...	...	1	3	...	...	...	...	17·3
Aortic constriction . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1st attack . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...
2nd „ . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...
3rd „ . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Pleuro-pneumonia . . .	6	...	...	...	...	...	...	...	...	...	...	...	...	5
1st attack . . .	1	...	1	...	...	...	...	...	...	...	1	...	...	1·6
2nd „ . . .	4	2	2	...	...	...	1	2	1	...	...	...	...	12·3
3rd „ . . .	1	...	1	...	...	...	...	...	1	...	...	...	...	4·3

TABLE IV—continued.

ACUTE RHEUMATISM.	Total.	Dis-charged.		Died.		Under 5	5-10	-20	-30	-40	-50	-60	Over 60	Per cent.
		M.	F.	M.	F.									
Tonsillitis	5	...	...	...	...	...	...	...	...	...	...	...	...	4·2
1st attack	3	...	3	...	...	...	...	1	1	1	...	...	...	4·7
2nd „ . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...
3rd „	2	...	2	...	...	...	...	...	2	...	...	...	...	8·7
Acute nephritis	1	...	...	...	...	...	...	...	...	...	...	...	...	·85
1st attack	1	1	...	...	...	...	...	...	1	...	...	...	...	1·6
2nd „ . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...
3rd „ . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Jaundice	1	...	...	...	...	...	...	...	...	...	...	...	...	·85
1st attack . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...
2nd „ . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...
3rd „	1	1	...	...	...	...	...	...	1	...	...	...	...	4·3
Delirium	2	...	...	...	...	...	...	...	...	...	...	...	...	1·7
1st attack	1	...	1	...	...	...	...	...	1	...	...	...	...	1·6
2nd „	1	...	1	...	...	...	...	1	...	...	...	...	...	3
3rd „ . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...

TABLE V.—Showing the causation of cases of Chorea, the number of cases which were unilateral during the whole attack, and the presence or absence of a cardiac murmur.

CHOREA.	Total.	Dis-charged.		Died.		Under 5	5-10	-20	-30	-40	-50	-60	Over 60	Per cent.
		M.	F.	M.	F.									
Total of cases	23	4	18	...	1	...	3	20	...	...	...	...	...	...
Cause :														
I. History of rheumatism .	9	2	7	...	...	...	1	8	...	...	...	...	...	39
(a). Personal	7	2	5	...	...	...	1	6	...	...	...	...	...	30
(b). Family	5	2	3	...	...	...	1	4	...	...	...	...	...	21·7
II. Grave nervous shock .	9	2	6	...	1	...	1	8	...	...	...	...	...	39
Family history of nervous disease . .	6	4	2	...	...	...	1	5	...	...	...	...	...	26
Unilateral during whole period of attack	4	...	4	...	...	...	1	3	...	...	...	...	...	17·8
With cardiac murmur :														
(a) Transient	4	...	...	...	...	...	...	...	...	...	...	...	...	17·8
1st attack	3	2	1	...	...	...	1	2	...	...	...	...	...	...
2nd „	1	...	1	...	...	...	...	1	...	...	...	...	...	...
3rd „ . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...
(b) Permanent	10	...	...	...	...	...	...	...	...	...	...	...	...	45·3
1st attack	6	2	3	...	1	...	...	6	...	...	...	...	...	...
2nd „	2	...	2	...	...	...	...	2	...	...	...	...	...	...
3rd „	2	...	2	...	...	...	...	2	...	...	...	...	...	...

TABLE VI.—*Cases of Abdominal Aneurysm, showing symptoms and post-mortem appearances in fatal cases.*

Initials, age, and sex.	Occupation.	Admitted.	Discharged.	Re- sult.	Previous history.	State on admission and progress of case.	Post-mortem appearances.
T. D., 42, M.	Gardener	March 31	April 14	D.	Formerly railway guard. Severe shake in train 1½ years ago. Gout 6½ years ago. Very well and able to work hard during last six months. On March 27th, on returning from work, taken with sudden violent pain in back. At same time lost power in legs and fell. Afterwards noticed legs cold and without feeling. On 28th passed water involuntarily. Blebs on legs on the 30th.	Well nourished. Complete loss of motion, sensation, and reflex action in legs. Legs cold, several blebs on them. No pulsation in either femoral artery. Systolic murmur at apex of heart. Arteries hard. Constant hic-cough. Motions passed involuntarily. Urine alkaline, albuminous. April 2nd.—Limbs warmer, otherwise the same; bed sore forming over sacrum. Urine 1024, alkaline, contains much blood, albumen $\frac{1}{4}$, no casts. 3rd.—Bowels acted; motion formed. Pulsation felt in epigastrium nearly to umbilicus. 9th.—Much the same; gangrene spreading; mind clear. 10th.—Vomiting and rigor; temp. 102° 2'. 13th.—Wandering; pulse weak; feet more discoloured. 14th.—Died.	Just above diaphragm was a sac-cular aneurysm the size of a small apple springing from posterior aspect of descending aorta. There was another smaller aneurysm in site of and including celiac axis. Aorta uniformly dilated between the two. The upper full of firm clot, the lower quite obstructed. Superior mesenteric plugged. Renals free. Aorta very atheromatous. Aortic valves normal. In lungs, liver, kidneys, and spleen nothing remarkable. Bladder in a state of gangrenous inflammation. Brain: fairly recent hæmorrhage of considerable size into left corpus striatum.
B. D., 32, M.	Policeman	June 5	June 8	D.	Health quite good till day of admission. On morning of that day slight attack of diarrhœa. Afterwards went for a row. Had dinner. Diarrhœa came on	June 5th.—A powerful man. Loss of power in legs almost complete. They are cold; no pulsation in femorals. Great pain in region of anus. Heart apparently normal. Well-marked murmur audible from ensiform to umbilicus. 6th.—Much pain about	Aneurysm size of an orange, springing from aorta just below diaphragm. Celiac axis, superior mesenteric, and renals sprang from sac. All occluded except first by clot in sac. This was also the case with aorta

<p>again. Went to closet at railway station, and felt weakness in legs on going there. Had a copious stool, but on trying to rise found that power in legs was quite gone. Came to hospital at 8.30 p.m.</p>	<p>W.L., 40, M.</p>	<p>June 17</p>	<p>June 30</p>	<p>D.</p>	<p>Has been a healthy man. Doubtful history of syphilis. Temperate. About 11 months ago began to have severe pains in lumbar region, which have lasted with slight intermission ever since. Pain generally dull aching, occasionally lancinating, and sometimes shoots down front of thighs. Bowels have been very obstinate from the first.</p>	<p>anus at night; small quantity of blood and faecal matter passed. Much vomiting. Three ounces of healthy urine drawn off. 7th.—Much vomiting. A few ounces of urine passed in bed; about 1 oz. drawn off. Hiccough for first time. 8th.—Vomiting still; no motion. Breath has become short. Can move legs fairly; apparently no loss of sensation; they feel warm. 6 oz. of urine passed; sp. gr. 1020, alkaline, offensive, no blood. At 1 p.m. great dyspnoea; constant hacking cough with expectoration of frothy, blood-stained fluid. Died at 4.30 p.m. Temperature did not rise above 100°·9°.</p>	<p>June 17th.—A powerful man. Nothing abnormal detected in thorax, abdomen, or back. Urine healthy. 22nd.—Pain has continued; bowels open; urine still healthy. 26th.—Pain very violent. Has had slight vomiting; bowels open; urine normal. 27th.—No urine for 24 hours. Before this 3 oz. thick, much albumen, granular and blood casts. Temp. 101°·4°. 28th.—6 oz. of urine. 29th.—Urine 7 oz. Severe pain down left leg. 30th.—Urine 4 oz., blood, albumen $\frac{1}{2}$. At 12 noon became suddenly collapsed. A diffused tumour felt in left iliac region; no pulsation; no murmur. No pulsation in lower extremities. Pulse at wrist 204; very feeble. Died at 1.15 p.m.</p>	<p>below sac. Though thus occluded none of the vessels themselves contained clot. Bodies of vertebrae eroded by sac. Heart hypertrophied; valves normal. Lungs in a state of intense cedema. Kidneys very large, much congested. Intestines: veins of rectum much distended, and mucous membrane much inflamed.</p>	<p>Large effusion of clotted blood in subperitoneal tissue on left side, most profuse in iliac fossa, pushing the kidney upwards and forwards. A sacular aneurysm arose from posterior aspect of aorta at coeliac axis. It did not involve renals. The sac had ruptured and given rise to the effusion of blood. There was extensive erosion of vertebrae, leaving the intervertebral substance intact. The heart and arch of aorta were healthy. Liver and spleen healthy. Kidneys: right congested; left contained a large wedge-shaped recent infarct occupying a quarter of the whole organ.</p>
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TABLE VI—*continued.*

Initials, age, and sex.	Occupation.	Admitted.	Discharged.	Re- sult.	Previous history.	State on admission and progress of case.	Post-mortem appearances.
G. T., 40, M.	Porter	May 25	Aug. 16	D.	Had syphilis 15 years ago. Pain in back and abdomen for 5 years. Constant gnawing pain, not radiating in any direction. In St. George's Hospital several times.	May 25th.—Fairly nourished. Pulsating tumours in left hypochondrium. Murmur over it systolic and prolonged into diastole. Heart normal. Slight difference in pupils. Urine, sp. gr. 1024, clear, acid, albumen $\frac{4}{10}$. June 10th.—Right pulse much stronger than left. July 23rd.—Pain worse. Tumour larger; thrill and bruit over it. Urine, sp. gr. 1024, much albumen, free blood-cells. Aug. 7th.—Since last note only 18 to 20 oz. of urine per diem. Vomiting from time to time. Pain worse. 14th.—Left leg has become swollen. Frequent vomiting. Pulse very feeble. Gradually sank, and died on the 16th. No rise of temperature.	Aneurysm of abdominal aorta, commencing at opening in diaphragm, and extending to third lumbar vertebra. Involves superior mesenteric, commencement of left renal artery, and coeliac axis. It contains much laminated clot. It presses on inferior cava and common iliac veins, especially left. Left renal passes in front of sac, and is much stretched. Tumour measures $5\frac{1}{2}$ by $6\frac{1}{2}$ inches. Some calcareous plates in thoracic aorta. Heart normal. Kidneys congested. Other organs natural.
E. S. 63, F.	Married	June 19	Nov. 1	R.	Quite well except for slight palpitation till 5 years ago. Then a severe fright and severe attack of rheumatism. Since then violent palpitation from time to time, and some pain in epigastrium. For 12 months has been getting worse and sight has been failing, and she has had much pain in eyes.	June 19th.—Emaciated. Heart enlarged. Systolic murmur at apex conducted to axilla and diastolic murmur at base. In epigastrium a pulsating tumour with thrill and loud blowing systolic murmur over it. Urine, sp. gr. 1010, no albumen. Signs of old choroiditis (? syphilitic) in eyes, and some old iritis in right. No oedema of legs. Pulsation equal in both femorals. September 23rd.—Has been much troubled with her eyes. No additional symptoms.	

TABLE VII.—Abstract of Fatal Cases of Ulcerative Endocarditis in which a post-mortem was made.

Initials, age, and sex.	Occupation.	Ad- mitted.	Died.	Previous history.	General symptoms and progress.	Condition of heart.	Condition of urine.	Post-mortem appearances.
H. A., 26, F.	Married	Nov. 25 1879	Jan. 6 1880	Rheumatic fever 7 years ago; dys- pnoea on exertion eversince. Caught cold 9 weeks ago; no rigor; no vo- miting; much perspiration. In- bed 14 days. No catamenia since this attack began; regular before.	Nov. 25th. — Thin, pale; dyspnoea and pain in heart; slight effusion with pain in knee-joints. Temp. 101.6°. Spleen enlarged. Dec. 5th. —Becoming much emacia- ted. Temperature rises every night; highest 102.8°. 8th. — Pain in lumbar re- gion with tenderness. 18th. —Cough very troublesome; perspires much; no rigors. Temperature still raised; eruption over whole body; slight headache; small quantity of bright blood in expectoration. Jan. 7th. — Convulsions; death. Highest temperature reached 102.8°.	Nov. 25th. — En- larged; loud systolic mur- mur at apex. Dec. 29th. — Heart sounds unaltered.	Nov. 25th. — Sp. gr. 1018, no albumen. Dec. 5th. — Sp. gr. 1015, trace of albumen. 29th. — Sp. gr. 1016, smoky.	No pericarditis. Heart much enlarged; aortic valves healthy; mitral incompe- tent. On one segment large ulcerated patch with clot adherent. Sub-pleural petechiæ. Lungs œdema- tous. Spleen very large, many infarcts, some old, some recent. Kidneys very large, generally congested, con- tained a few old infarcts, and irregularly distributed patches of interstitial and tubular nephritis. Brain: hæmorrhage over whole surface of right hemisphere, proceeding from a vessel situated in a small cavity, of doubtful origin, in parietal lobe.
S. W., 38, F.	Married	Jan. 20 1859	Apr. 13	Scarlet fever fol- lowed by rheuma- tic fever 24 years ago. Severe at- tack of rheumatic fever again in 1859. Got wet last June; had rigors. In July, pain in left lum- bar region. Since, gradual emacia- tion, loss of strength, and in- creasing dyspnoea. No catamenia for 13 months; regu- lar before.	Jan. 20th. — Very thin, sal- low; pain and tenderness over shins; cough. Spleen to margin of ribs. 26th. — Perspires much. Tempe- rature rises every night, and does not fall to normal in morning; highest 103.4°. March 4th. — Appetite bad; no sickness; dry cough; per- spires much; no rigors; feet feel cold. April 5th. — Harsh breathing with cre- pitation at right apex. 11th. — Breathing very ra- pid and shallow. 12th. — Wanders slightly. 13th. — Died. Highest tempera- ture reached 103.4°.	Jan. 20th. — En- larged; loud systolic and pre- systolic mur- mur at apex; second sound accentuated. Feb. 16th. — Sounds the same. March 31st. — Loud double mur- mur, systolic and diastolic at base. Double murmur with thrill at apex.	Jan. 20th. — Sp. gr. 1016, clear, trace of albu- men. Feb. 16th. — Urine the same. March 31st. — Sp. gr. 1012, consider- able quantity of albumen. April 1st. — Sp. gr. 1020, free blood cells, much al- bumen. 12th. — Sp. gr. 1015, clear, hyaline casts, and blood cells.	Commencing pneumonia at apex of right lung. Heart hypertrophied; aortic and mitral valves incompetent. Mitral enormously thick- ened by vegetations on ven- tricular aspect, and some also on auricular. Excre- scences can be peeled off, leaving raw, ulcerated sur- face beneath. Aortic valves also studded with vegeta- tions. Spleen contained no infarcts. Kidneys, "large white," contractions here and there as of very old infarcts. Brain normal.

TABLE VII—*continued.*

Initials, age, and sex.	Occupation.	Ad- mitted.	Died.	Previous history.	General symptoms and progress.	Condition of heart	Condition of urine.	Post-mortem appearances.
J.C., 29, F.	Single	Mar. 12	Mar. 25	No rheumatic fever. Bad ulcerated throat 11 years ago, ? syphilitic. Flooding 8 mos. ago. Chest became affected at same time. Cough and dyspnoea for 5 months; sickness after cough. Losing flesh for 8 months. Night sweats for 3 or 4 months. Catamenia now regular.	March 12th.—Pale, anæmic; slight œdema of ankles; constant pain in back and under left breast. Dyspnoea, cough, expectoration frothy, streaked with blood. Very thirsty. Temp. 102.2°. 15th.—Sickness, headache, much cough, ankles painful. Rigor at 7.30 p.m. Temp. 105.8°. 16th.—Much pain in back; still sickness; more rigors. 18th.—Intense pain under left breast; more sickness and rigors. Temperature has reached 104.8°. 20th.—The same, much pain and sickness, with rigors and great variations of temperature; highest reached 106.2°. 23rd.—Great pain in left side; rigor at 4 a.m.; very weak. 25th.—Delirious, died at 8 p.m. after urgent dyspnoea.	March 12th.— Loud systolic and diastolic murmur audible over front of chest; systolic murmur also at apex, conducted to axilla.	March 12th.— Sp. gr. 1010, albumen $\frac{1}{10}$ th. 16th.—Sp. gr. 1012, dark, albumen $\frac{1}{8}$ th. 19th.—Sp. gr. 1014, granular casts, epithelium, free blood cells, crystals of uric acid. 23rd.—Albumen $\frac{1}{4}$ th.	Old pleuritic adhesions; congestion and œdema of lungs. Heart not greatly enlarged; a few vegetations on tricuspid valve. Left ventricle; cavity dilated, walls soft and fatty. Mitral valve incompetent with vegetations; aortic the same, much eroded. Patch of vegetations on inter-ventricular septum adherent to similar patch on flap of mitral valve. Spleen much enlarged; very little normal substance visible, almost the whole being made up of one huge recent infarct. Organ firmly adherent to inner surface of abdominal wall. Kidneys not much enlarged. Capsule not adherent. Substance pale grey, very hard ("cardiac kidneys").
J.J., 23, M.	Labourer	Mar. 20	Apr. 27	Rheumatic fever when 17. No history of dyspnoea since. Taken ill suddenly with	March 20th.—Very pale and anæmic; no œdema; no cough; no headache; spleen somewhat enlarged. Temp. 101.9°. 31st.—Shivered	March 20th.— Slight presystolic thrill at apex; systolic murmur con-	March 20th.— Smoky, sp. gr. 1015, free blood, epithelial, hyaline and granu-	Pericardial effusion 15 oz. Heart: right side dilated; valves healthy; left hypertrophied; posterior set of chordæ tendinæ of mitral

<p>rigors and perspiration on Dec. 26, 1879. Since then had to give up work, shivering every evening between 8 and 9 o'clock. Perspired much, was very thirsty, and passed much water. Has not felt hot after rigors. Later they have been less frequent, at intervals of 3 to 7 days. Last on March 19th.</p>	<p>for first time; temp. 104°3'. Has perspired much from time to time. April 9th.—Shivered almost every day since last note. Very thirsty at times; no pain in joints. 14th.—Cough more troublesome; sputum viscid; pain over heart. 19th.—Diarrhea; pain in knees. From this to death rigors at times; highest temp. 104°3'. Vomiting the day before death. Died April 27th.</p>	<p>ducted to axilla. April 10th.—Marked presystolic thrill at apex; systolic murmur as before; pericardial rub at base.</p>	<p>lar casts. 23rd.—Sp. gr. 1015, albumen blood, a few casts. April 6th.—Sp. gr. 1015, small amount of albumen.</p>	<p>valve ruptured; ends thickened and covered with clot; aortic valves normal. Spleen: one old infarct near lower border; substance congested and friable. Kidneys: large, swollen, pale, and good specimens of "large white."</p>
<p>W.C., Labourer Aug. 13 Sept. 8 24, M.</p> <p>Rheumatic fever 4 years ago. No history of dyspnea till present illness. Ten weeks ago strained himself, and was seized with sudden pain in chest. Pain left him, but shortness of breath continued, and legs were tender. Severe pain and swelling about left ear 3 or 4 days before admission.</p>	<p>Aug. 13th.—Anæmic; cannot open jaw for tender swelling on left side; no swelling of joints; tenderness on pressure over legs. Temp. 102°2'. 19th.—Tenderness of legs continues; left arm also tender above elbow. Temperature remains high; highest 103°2'. No perspirations; no rigors. 27th.—A good deal of cough. Temperature remains high. Some swelling of knees. Sept. 8th.—Died after an attack of convulsions. Highest temp. 103°4'.</p>	<p>Aug. 13th.—Enlarged; thrill at apex, with loud systolic murmur conducted to axilla. 27th.—Systolic murmur at apex.</p>	<p>Aug. 13th—Sp. gr. 1012, albumen, free blood, and hyaline casts. 19th.—Sp. gr. 1010, albumen $\frac{1}{16}$th. 27th.—Large amount of urine passed. Sep. 23rd.—Sp. gr. 1010, considerable amount of albumen.</p>	<p>Pericardium adherent all over. Heart hypertrophied; aortic valves slightly incompetent; mitral valve constricted, and on it were numerous vegetations and some ulceration. Lungs cedematous. Spleen very large, many infarcts. Kidneys: typical specimens of "large white;" no infarcts. Brain: hæmorrhage into both ventricles, breaking down substance of fornix, corpus callosum, &c.</p>

TABLE VIII.—Cases of Empyema treated during the year.

Initials, age, and sex	Ad- mitted.	Dis- charged.	Re- sult.	History.	State on admission.	Treatment and progress of case.	Post-mortem appearances and remarks.
J. S., 35, M.	Dec. 30 1879	Mar. 8 1880	D.	Mother died of phthisis; no previous illness. Cough began 5 months ago. 3 months ago began to have severe pain in right side of chest, and to spit up quantities of matter; cannot lie on right side; has lost much flesh.	Very thin; much cough, with muco-purulent expectoration. Slight cedema affecting thorax. Right dull from 2nd rib downwards anteriorly; posteriorly from angle of scapula. Absent breath sounds with ægophony; no râles. Left everywhere resonant; much rhonchus. Heart: loud double pericardial friction over its area. Liver reaches to level of umbilicus. Urine normal. Temp. 99·2°	January 3rd.—Paracentesis thoracis performed, 38 oz. of non-offensive pus drawn off. 13th.—Still much cough and expectoration. Dulness diminished; breath sounds feeble at base. 17th.—Friction heard all over right back; no pericardial friction. Temperature slightly raised at times. 30th.—Paracentesis thoracis, 20 oz. of pinkish pus with hepatic odour. Urine, no albumen. February 7th.—Much dyspnoea; free opening made on right side. From this time patient gradually got worse and died on March 8th. Latterly temperature has been for the most part sub-normal. Urine never contained albumen.	The empyema had undoubtedly burst through the lung before admission. No P. M. was allowed, but an examination was made sufficient to show that the abscess had not originated in the liver, as the characters of the fluid had at times suggested that it might have done.
R. C., 33, M.	Jan. 7, 1880	June 24	C.	Family history good; had "hepatitis" in Jamaica in 1871; dysentery in Demerara in 1878, shortly followed by pain in left side; cough, dyspnoea, and a small swelling between ribs on left side, which was opened and has discharged ever since. Cough has ceased since side	Very thin; weighs 8st. 8lbs. Flattening beneath left clavicle with deficient expansion. Right side measures 17 inches; left, 16½. Dulness over lower half of left lung, with absence of breath sounds, vocal fremitus, and resonance. Between 6th and 7th ribs, 1½ inches outside nipple, is an opening which discharges pus, especially on coughing. Urine normal. Temperature normal. Finger ends	From time of admission till March 4th the opening continued to discharge, and the physical signs remained much the same. His appetite was good throughout and he gained a stone in flesh. The temperature was generally slightly elevated in the evening. He had slight attacks of diarrhoea; the urine was normal. On March 4th the opening in chest was enlarged, and a piece of rib cut out. Pus evacuated and cavity of pleura washed out. From this time he continued to do well. June 20th.—Right side, 17½ in., left, 16½ in. Breathing audible to base on left side. June 24th.—Discharged well.	The lung on the affected side appeared to have nearly if not quite recovered on his discharge. During the operation the bone nozzle of a syringe was accidentally left in wound, but gave no inconvenience and was never seen again.

14, M.	2 months. On January 2nd was seized with shivering, pain in right side, dyspnoea, and vomiting. Sputum has been of a rusty colour. Has had headache, and has been delirious.			right side, sputum rusty. Respiration, 60 per minute. Signs of consolidation with some fluid over lower half of right lung; left side resonant; loud friction just below nipple. Temperature 101. Urine, sp. gr. 1017, clear, no albumen, chlorides nearly absent.	12th.—Signs of consolidation over upper half of right lung posteriorly, thence to base signs of fluid. Puncture with aspirator drew off $2\frac{1}{2}$ oz. of clear serum. Friction heard and felt at left base. 23rd.—Right side measures $15\frac{1}{4}$, left $14\frac{1}{4}$ inches. Signs of fluid more marked at right base. Aspirator drew off 18 oz. of pus. 25th.—Dyspnoea increased with great lividity. Died. Temperature normal for two days before death; never exceeded 101.9° .	
S. M., 17, F.	Has a brother in hospital suffering from pleurisy with effusion. On February 13th thinks she caught cold. On the 14th when in bed was seized with pain in the limbs and in left side, much increased by movement. No vomiting or expectoration.	Feb. 15	Aug. 20	C.	Feb. 17th.—Dyspnoea increased; dulness over lower half of left lung, with tubular breathing. Temp. 104.2° . Eleven leeches applied to left side relieved pain. 25th.—There has been dulness over whole of left lung, now only over lower half; right lung has also been somewhat affected, but is now recovered; left side aspirated, 10 oz. of pus withdrawn; opening made antiseptically in ninth interspace and pus evacuated. From this time convalescence was much delayed by considerable rises of temperature, but eventually she quite recovered.	The side on discharge had contracted much, but the patient was in perfectly good health.
H. E., 7, M.	Taken ill 3 weeks ago with severe vomiting, pain in limbs and abdomen. Two days after became delirious and was seized with severe pain in left side. Slight cough at same time. Has been getting worse.	June 21	Aug. 5	C.	June 23rd.—Half an ounce of clear serum withdrawn by aspirator from left side. July 1st.—Heart beating to right of sternum; 9 oz. of pus withdrawn by aspirator. 10th.—Free incision made between ribs on left side; about one pint of sweet pus came away. From this time patient did well. There was hardly any discharge after operation, wound healed perfectly, and side recovered, only slight dulness at base remaining.	

TABLE VIII—*continued.*

Initials, age, and sex	Ad- mitted.	Dis- charged.	Re- sult.	History.	State on admission.	Treatment and progress of case.	Post-mortem appearances and remarks.
A. Y., 6, F.	July 20	Sep. 21	C.	Grandfather and aunt died of phthisis. Has had several attacks of bronchitis. Present illness said to have begun 5 months ago with "inflammation of the bowels," followed by inflammation of lungs. In May had diarrhoea; never so well since. Present illness commenced in September with cough and pain in side. Has had a good deal of expectoration. Right pleura tapped before admission, and pus was drawn off. Has lost much flesh.	Very emaciated, cough, weakness, and there is a purulent discharge from the umbilicus. Dulness over lower half of left lung, and crepitation at apex; some crepitation at right base. Discharge from umbilicus increased by pressure on sides of abdomen. Temp. 100·6°. Urine normal.	July 23rd.—Half a pint of pus drawn by aspirator from left pleura; no discharge now from umbilicus. Aug.—Patient is better, but discharge from umbilicus has continued; puncture made on left side and pus found; 2 drachms of carmine injected; the carmine did not appear in the discharge from umbilicus. On going out patient was much better, only a very slight watery discharge from umbilicus.	The illness appears most probably to have commenced as an empyema, which burrowed down deep into the abdomen, and at same time found vent through umbilicus.
W. B., 42, M.	Nov. 27	Dec. 31	D.		Emaciated. Complains of cough and pain in right side. On right side signs of fluid in lower half of pleura. Right side measures 18, left 16½ inches. Liver extends to level of umbilicus. Temp. 100·8°. Urine normal.	Nov. 30th.—25 oz. of thick, reddish-brown purulent matter drawn off by aspirator. Subsequently, on Dec. 8th, a piece of rib was cut out, and the pleura evacuated and washed out antiseptically. The patient appeared relieved at first, but afterwards gradually sank and died. Temperature tended to be subnormal for some days before death.	No post-mortem allowed. The character of the fluid, and the result of the case, render it probable that there was malignant disease.

TABLE IX.—*Abstract of Fatal Cases of Cerebral Tumour.*

Initials, age, and sex.	Occupation.	Admitted.	Died.	Previous history.	General symptoms and progress.	Paresis.	Post-mortem appearances.
J. C. 39, F.	Married	Aug. 20, 1879	Jan. 13, 1880	Contracted syphilis 9 years ago. Bone came from jaw in July, 1878. In March, 1879, left side of face became drawn, and at same time right side of face became numb and hearing defective in right ear. Right eye removed in June, 1879. Pain at times across temples for one year. Sight of left eye defec- tive, and lid has drooped for 3 weeks. No affec- tion of limbs.	Aug. 20th.—Severe headache. Urine nor- mal; temperature nor- mal. Sept. 20th.—Is better; feels giddy on stooping. Dec. 26th. —Has been delirious and passing evacua- tions in bed. 31st.— Mind much clearer. Jan. 12th.—Appears to be conscious. 13th. —Died. Temperature normal at death. Has seldom been raised during illness.	Aug. 20th.—Olfactory nerve unaffected; no optic neuritis; left 3rd nerve paralysed; marked loss of sensa- tion on right side of face; masseter para- lysed; portio dura on right completely para- lysed; deaf on right side; tongue not affec- ted; taste good; limbs unaffected. Nov. 29th. —Paralysis of left 7th nerve; very slight, if any of 5th; 3rd much better, but pupil fixed. Tongue protruded much to right. Dec. 31st.—Right side of face immovable; left partially movable. Jan. 8th.—For some days spasms of limbs; conjunctiva inflamed. 12th.—Cannot swallow or put out tongue.	Brain: arteries at base thickened; tissues in in- terpeduncular space infl- trated with new growth (syphilitic). Medulla, pons, and crura much softened; left crus contains a mass of new growth the size of a pea. The left 3rd, right 5th, and 7th nerves were much atrophied and soft; right 3rd and left 7th slightly so; right 9th very soft and atrophied, and covered by new growth. Nothing remarkable in other organs.

TABLE IX—*continued.*

Initials, age, and sex.	Occupation.	Admitted.	Died.	Previous history.	General symptoms and progress.	Paresis.	Post-mortem appearances.
C. S. 46, M.	Labourer	Nov. 13, 1880	Dec. 8	Previous history good. Present illness began 10 weeks ago with severe frontal headache. No vomiting. Had to give up work for the pain. About 3 weeks ago began to lose power in right hand, and intellect began to fail. Paralysis has become more complete in hand and affects leg; intelligence has become more affected, but pain in head better. Has had no fits. Sight has been getting dim.	Nov. 13th.—Drowsy and apathetic; intellect obviously affected. Urine and temperature normal. 18th.—More drowsy; speaks only in a whisper; calls an inkstand a “penholder.” 20th.—Will not speak unless told to several times. 26th.—Still drowsy; urine passed in bed. Dec. 3rd.—Temperature has been raised for three days. To-day, just before death, it reached 104° 8’.	Nov. 13th.—Incomplete paralysis of right arm and leg; no apparent facial paralysis; no loss of sensation. Says things look dim, but does not see double. There is doubt- le optic neuritis. Has control over evacua- tions. Dec. 3rd.—Left eyelid does not close so well as right. Loss of power in arm and leg more com- plete.	Brain: no meningitis; a soft, brownish, spongy, vascular tumour occupied corpus callosum in greater part of its extent. It was largest anteriorly, and extended laterally into cen- tral white matter, much more on left than right side. On right side it stopped opposite extremity of nucleus caudatus, on left extended round to ex- pansion of internal capsule. Neither convulsions nor ganglia were affected.
M. K. 39, F.	Single	April 5, 1880	June 24	Six or seven years ago had a fit, with transient loss of power. Afterwards well till 2 or 3 years ago when she began to have severe pains in eyes. Sight began to fail at same time, and in August last she became quite blind. Headache has been very severe since. At times she “loses her senses” for a time.	April 5th.—Severe head- ache in paroxysms; vomiting at times. May 14th.—Headache and vomiting have continued; delusions at times. June 1st.—De- lusions have continued, and is very noisy at times. 4th.—Has been very drowsy and quiet all day; evacuations all passed in bed. 20th.—Very drowsy; can	April 5th.—Atrophy of optic discs; some in- continence of urine. 26th.—Occasional tremors of whole body when excited. June 13th.—Some difficulty in swallowing for last two days; there ap- pears to be slight left facial paralysis. 24th.—No fits; apparently no paralysis of limbs or face.	Brain: tumour of rounded form and size of a hen’s egg situated in anterior lobe of right hemisphere. It rested on orbital plate, was adherent to bones, and passed down into middle fossa, displac- ing Sylvian fissure back- wards. It did not ascend above floor of lateral ven- tricle, but involved anterior part of nucleus lenticularis, but not optic thalamus.

M. M. 25, F.	—	July 14	July 15	No history known. Came from King's College Hospital. Said there to have suffered from unilateral epilepsy.	July 14th. — Drowsy, semicomatose; apparently no loss of sensation; breathing rapid; stertorous; urine passed voluntarily; normal. Temp. 99°. 15th.—Died. Temp. at death 107·4°.	July 14th.—No optic neuritis found; no definite paralysis found; apparently no loss of sensation; right pupil larger than left.	The optic nerves were compressed and atrophied; right 3rd nerve passed through tumour, but was healthy. The tumour was a sarcoma. Other organs healthy.
B. W. 25, M.	Stationer	Aug. 7	Nov. 20	No previous illness. Illness began in June with severe sickness, preceded by great occipital headache. The pain was relieved by the vomiting. Since August 1st has had double vision. Has suffered from giddiness on standing up, and occasional tingling down left side.	Aug. 7th.—Pain in head and vomiting. 20th.—Much mucopurulent expectoration; vomits much. Oct. 8th.—Vomiting and headache continue; is not kept in bed. Nov. 5th.—Has not vomited for a week; headache much the same. 20th.—Symptoms continued much the same. On this day he suddenly became comatose and died. Temperature normal throughout. No affection of gait.	Aug. 7th.—Appears to have double vision. 16th.—Paresis of right external rectus; no optic neuritis; feeling of pins and needles in feet. Oct. 9th.—Double optic neuritis with hemorrhages; symptoms of right 6th nerve the same.	Brain: tumour, apparently tubercular, size of a pigeon's egg, situated in, and appearing on, surface of left lobe of cerebellum. No meningitis. Tubercular excavation of both lungs, and ulceration of intestines. Other organs normal.

TABLE IX—*continued.*

Initials, age, and sex.	Occupation.	Admitted.	Died.	Previous history.	General symptoms and progress.	Paresis.	Post-mortem appearances.
A. C. 52, M.	Labourer	Mar. 12	April 13	Has suffered from occasional attacks of gout for the last 7 years. With this exception has been a healthy man. Present attack referred to a blow on head nearly 3 weeks before admission. Symptoms have come on gradually during this time. Right leg first became affected, then hand, and speech has since been imperfect.	Stupid; intellect dull; temperature slightly raised; urine contains a trace of albumen. Had an attack of gout whilst in hospital. A few days before death became comatose. Temperature at time of death 106°.	Partial paralysis of right arm, and more complete of leg; face also affected. Some loss of sensation; aphasia; control over sphincters; no optic changes.	Tumour of large size found in left temporo-sphenoidal lobe.

TABLE X.—*Cases of Cerebral Hæmorrhage and Softening in which a post-mortem was made.*

Initials, age, and sex.	Occupation.	Admitted.	Died.	History of attack.	Symptoms.	Post-mortem appearances.
H. A., 26, F.	Married	Nov. 25, 1879	Jan. 6, 1880	v. Ulcerative endocarditis. Table VII.	Convulsions.	
W. H., 49, M.	Tailor	May 6, 1880	May 7	At 6 a.m. on May 6th he suddenly fell down; not insensible, but answered questions incorrectly.	Very Semi-comatose. Partial right hemiplegia. No change in fundus of eye. Did not speak, but knew wife.	Greater part of left fronto-parietal lobes ploughed up into large ragged cavity by hæmorrhage, which had originated in nucleus lenticularis, and burst through

M. B., 70, F.	June 14	June 24	Admitted at 9 a.m.	<p>7th.—Died at 1.45 a.m. No record of temperature.</p> <p>June 14th.—Emaciated; unconscious; right hemiplegia. No cardiac murmur. Temp. 96·6. 18th.—More conscious, nods when spoken to. Has passed evacuations in bed since admission. 24th.—Died; temperature normal at time of death.</p>	<p>into ventricle. Caudate nucleus and optic thalamus comparatively unaffected. Arteries at base much diseased. Kidneys: very early interstitial change. Heart slightly hypertrophied; no valvular disease.</p> <p>Hæmorrhage originating in corpus striatum and extending into left ventricle. Heart hypertrophied; mitral valve slightly incompetent. Kidneys: contracted granular.</p>
W. C., 24, M.	Aug. 13	Sept. 8	Labourer	<p>v. Ulcerative endocarditis.</p>	
W. U., 56, M.	Nov. 19	Nov. 20	Labourer	<p>Fell down in a fit while at work on day before admission. Said to have had two fits before. Has drank a good deal lately.</p>	<p>November 19th.—Well nourished; insensible; left hemiplegia; stertorous breathing. Urine, no albumen. Temp. 101·6. 20th, 2.30 a.m.—Passed urine in bed. Temp. 108·2. Died shortly afterwards.</p> <p>Hæmorrhage into right ventricle with laceration of parts around; much atheroma of vessels at base of brain. Heart: hypertrophied. Aorta much diseased throughout. Kidneys: very early contracted granular. Early pneumonia on left side.</p>
H. T., 46, M.	Dec. 11, 1879	Feb. 1, 1880	Labourer	<p>Nothing remarkable in previous history. Present illness began in November with giddiness, pain in head and double vision. On day of admission noticed that he dragged his left leg, and that the arm was weak. Has had no vomiting.</p>	<p>Brain: vessels at base atheromatous. Yellow softening of nucleus lenticularis and crus on right side. Lungs: some patches of broncho-pneumonia in left. Other organs normal.</p>



TABLE X—*continued.*

Initials, age, and sex.	Occupation.	Admitted.	Died.	History of attack.	Symptoms.	Post-mortem appearances.
E. S., 53, F.	Married	Jan. 4, 1880	Jan. 11,	Never had rheumatic fever. 7 years ago had an attack of right hemiplegia; was unconscious for 3 days. In 6 or 8 weeks quite recovered. Slight similar attack 4 years ago. "Strange" at times since first attack. On day of admission apparently quite well at 3 p.m., at 8 p.m. her son found her sitting in a chair quite unconscious. Admitted at 10 p.m.	January 4th.—Pale; semi-comatose; has partial left hemiplegia. Heart enlarged; no murmur detected. Urine, small quantity of albumen. Temp. 96°. Breathing stertorous. 5th.—Rather more conscious, a good deal of twitching of right side. Urine, sp. gr. 1029, trace of albumen. 7th.—Condition much the same. Evacuations passed involuntarily. 11th.—Continued much the same and died at 12.30 a.m. Temp. at time of death 99°.	Brain generally wasted. Right middle cerebral artery blocked by a firm clot. Nucleus caudatus and lenticularis soft and congested on the same side. On left side they were atrophied and firm. Heart enlarged. Some incompetence of aortic valves, mitral constricted with many vegetations on it. Lungs: right lower lobe solidified by recent pulmonary apoplexy. Kidneys: recent infarct in right, other organs not remarkable.
H. Y., 33, M.	Car- penter	Feb. 3	Feb. 7	Previous history not known. On January 31st was strange in manner and staggered in his walk. Appeared well next morning. Had dinner, went upstairs, vomited, felt giddy. Threw himself on bed and became unconscious. Remained so till admission.	February 3rd.—Face flushed; unconscious; no movement in right side of body. Urine alkaline, albuminous. Temperature normal. 6th.—More sensible; swallows well; bowels open twice. P.M. temp. 101-8. Gradually became worse with laboured respiration, and died on February 7th at 6 a.m.	Brain: membranes and substance rather congested; substance generally softer than natural. Centrum ovale majus on left side especially soft, but not actually broken down. Heart: valves normal; some ecchymoses beneath pericardium. Lungs: some supposed ecchymoses; many patches of broncho-pneumonia. Kidneys normal.
E. M., 29, F.		March 19	March 19	Brought to the hospital unconscious having been picked up in the streets.	March 19th.—Unconscious. Apparently suffering from right hemiplegia. Died a few hours after	Brain: left internal carotid contains a clot $\frac{1}{2}$ inch long, and lying in the artery just beneath its division. No appearance of

E. D., 63, F.	Married	Aug. 5	Oct. 16	History of her having attended some hospital for heart disease.	admission.	<p>August 5th.—Great pain in head; has delusions; sight dim; no optic neuritis; speech thick. Temp. normal; urine normal.</p> <p>12th.—Partial right facial paralysis; headache and sleeplessness with delirium. October 15th.—Has been much the same, but right side now seems to be paralysed, and she is much weaker. Evacuations passed in bed. Temp. has been raised for two or three days. 16th.—Died. Temp. to-day from 104° to 106·2°.</p>	<p>softening. Heart: right side somewhat hypertrophied; left auricle dilated; mitral valve constricted, ulcerated, and covered with vegetations on auricular surface.</p> <p>Brain: no inequality of hemispheres; arteries at base atheromatous. Small elongated patch of red softening occupying outer part of left corpus striatum, to a small extent implicating optic thalamus, and passing beneath descending cornu of ventricle into white matter of occipital lobe. Pons Varolii on left side contained a small patch of softening. Heart: slight mitral regurgitation; calcareous patch at base of one flap. Other organs normal.</p>
S. B., 45, M.	Solicitor	Sept. 11	Sept. 29	Nothing definite known.	<p>September 11th.—Loss of power in left side of body. Speech indistinct; wanders a good deal. Answers some questions correctly. Passes evacuations in bed. Temp. normal. 23rd.—Much the same. 28th.—Has become rapidly worse. Breathing stertorous. Paralysis of left side quite complete; left pupil larger than right. Temp. 106°. 29th.—Died. Temp. at time of death 106·6°.</p> <p>Brain: considerable excess of subarachnoid fluid; vessels at base atheromatous; large patch of softening in outer part of right corpus striatum and invading white matter of hemisphere; no apparent obstruction of vessels. Heart: left ventricle much hypertrophied; valves competent; aorta very atheromatous. Kidneys normal.</p>		

SPECIAL ABSTRACTS.

I.—SCARLET FEVER.

With the exception of the following there was no very remarkable case.

E. G—, æt. 15, female. A younger sister of the patient's was suffering from a severe attack of scarlet fever at home. On Thursday, July 2nd, patient had been in her usual health and very good spirits. On the morning of the next day she complained of her throat feeling sore, but she continued up all day, and was engaged all the afternoon in washing some of her sick sister's clothes. The sore-throat got worse towards the evening, and on Saturday morning she was delirious and in all respects much worse, and continued so till the evening, when she was brought to the hospital and admitted about 7.30. Her sister had died in the morning. On admission she was a well-nourished girl, unconscious, with no eruption visible on skin, but the tonsils were swollen, and there was a white patch on the left. Temp. $103\cdot4^{\circ}$. After sponging the body became very livid, and a petechial eruption appeared all over it. The temperature rose to $105\cdot3^{\circ}$, and she died two hours after admission.

Post-mortem.—The mucous membrane of the pharynx was much congested, the tonsils were much swollen, and in each was a large abscess containing yellowish pus. There was no obvious change in any other organ. The spleen was small.

II.—TYPHUS FEVER.

Both cases nurses in hospital.

CASE 1.—M. C—, æt. 22. During the last month has been nursing three patients suffering from typhus fever.

On November 15th, 1879, had headache and nausea, no vomiting. Felt very cold, but no rigor. Has lost her appetite and felt pains all over her and lassitude. Has had no diarrhœa.

On November 18th spots were first noticed on back of wrist, chest, abdomen, and upper part of thighs. The temp. was $104\cdot6^{\circ}$. The urine contained no albumen. The next day the eruption was very copious, and on the 20th she was delirious. The temp. reached 105° , and the urine contained a trace of albumen

From this time she passed into a typhoid condition, lying on her back, very restless, moaning, passing her evacuations in bed. The temperature remained up with scarcely any remission, the highest noted being 105.6° , and the lowest 102° , and it generally reached or exceeded 104° . On the 27th it sank to 100.4° , but rose again in the evening to 103.4° . On the 29th it was noted that she had the physical signs of pneumonia at the base of both lungs. On the 1st of December the temperature sank to 98° . On the 3rd the rash was fading but still present; she was still in the typhoid condition. On the evening of the same day she fell into a deep sleep. On the evening of the 4th she was quite rational but drowsy, and had ceased to pass her evacuations in bed. From this time she continued to do well, with the exception of a rise of temperature, which lasted for a few days, and was apparently due to some recrudescence of the pulmonary complication.

She was treated with carbonate of ammonia and from 4 to 6 ounces of wine. On the 29th of December she was sponged, and temp. fell from 104° to 102.6° .

CASE 2.—M. A. V—, æt. 35, admitted December 30th, 1879. Had been nursing the last patient. Not felt well for fourteen days. On the 26th complained of headache, felt very cold on the 28th, and on the 29th had general pains in limbs and more headache. The temperature on the 30th was 103.8° . On January 1st the eruption was first noticed, and was very copious next day. On the night of the 5th she rambled slightly for the first time and continued to do so the whole of the next day. On the 7th she was very deaf, but quite rational. Rash had nearly faded. Temp. 101° . She had had no diarrhœa. On the 9th, the thirteenth day of the disease, the temperature fell to normal, was slightly raised the next day, and from that time forward patient continued to improve. The highest temperature reached was 105.2° on the third day. With that exception it never reached 104° .

III.—PYÆMIA.

Four cases. All arose from causes more or less different.

CASE 1.—Male, æt. 20. Admitted January 8th, 1880. Fourteen days before admission ran a splinter into little finger. The inflammation spread up arm, and three days before admission was seized with shivering and great pain in side of chest. On admission he had pleurisy, and pericarditis soon set in, and he had from time to time pain and swelling of joints. The temp. was 101° on admission; urine normal. Case ran a very chronic course. Temperature constantly raised, but never above 103° . Died on February 17th.

Post mortem.—No abnormal condition of joints. Both pleuræ adherent throughout. Pericardium much thickened and contained a pint of pus. Lungs generally congested and œdematous. Liver “nutmeg.” Spleen very large. Kidneys healthy.

CASE 2.—Male, æt. 6. Admitted February 5th for symptoms of chronic lung disease, with supposed empyema at right base. Aspirator needle was inserted into dull part of right pleura three times without fluid being found. After the third tapping symptoms of pyæmia rapidly set in and he died on April 1st.

Post mortem.—Much tubercular excavation of lungs. Large caseous mass at right base. Pus in all the joints.

CASE 3.—Female, æt. 13. Admitted June 22nd. Died next day. Taken ill five days before admission with headache, pains in right knee and in abdomen. Delirious before admission. Supposed to be suffering from rheumatic fever. Said not to have had rigors. On admission looked very ill; skin dry; temp. 101.2° ; right knee and index finger swollen and red; also cedema and great tenderness over right tibia. She was delirious through the night, and next day there were signs of pleuro-pneumonia and pericarditis, and a tolerably copious pustular eruption had come out over the body. There had been no shivering. Highest temp. 102.6° . Died in typhoid condition.

Post mortem.—Layer of pus separating periosteum from bone over whole of front of right tibia. Pus also in joints. Pericarditis and small abscess in heart wall. Infarcts in lungs and kidneys.

CASE 4.—Female, æt. 36. Admitted October 30th; died next day. Ten days before admission had a miscarriage, and since then had been seized with pain in joints. On admission pain and swelling in knees and ankles. General bronchitic sounds over chest. Sordes on lips. Fetid discharge from vagina. During the night passed into a typhoid condition. Temp. rose to 105.5° , and she died next morning.

Post mortem.—Pus in left knee- and ankle-joints, and in right shoulder-joint. No infarcts in internal organs. General peritonitis. Spleen very large and soft.

IV.—SPORADIC CRETINISM.

One male and one female. Not related.

CASE 1.—Male, æt. 17. Father and mother healthy. Patient is the third of six children, all the others being well. Patient born at full time. Appeared well till four years old, when he began to mope. Since then growth has been stunted and intellect has not developed.

On admission looks as if six or seven years old. Is three feet high, limbs thick and clumsy, abdomen swollen. Head large, forehead prominent, eyes small and wide apart, nose flattened, lips thick, mouth large and gaping. Skin dry and hard. His walk is rolling. Generative organs ill developed. No hair on pubes. A soft elastic lump on each side of neck, just above clavicle. Is amiable in disposition, but obviously defective in intellect. Memory is fairly good and has great affection for his mother. Understands what is said to him, and answers simple questions well, but slowly. Cannot read or write, or count more than as far as three. Is cleanly in habits. Urine normal. Temp. rather subnormal.

CASE 2.—Female, æt. 7. Father and mother and four brothers and sisters healthy. Nothing noticed till patient was two years old, when she began to become deficient mentally and bodily. Legs gave way under her, and she would laugh and cry without reason. On admission she was completely idiotic, could not talk or walk. Much the same general condition as in the last case, but more

exaggerated. Had the same swellings over clavicles. Hair very harsh and dry. She appeared to be passionate, and during her stay passed all her evacuations in bed.

V.—ANÆMIA.

Sixteen cases: four males, twelve females. In one male the disease was fatal, and in one other male and one female it was probably pernicious.

Abstract of fatal case.—F. M—, æt. 37, farrier. Admitted January 30th. Died February 22nd.

Family history.—One brother died with symptoms like those of the patient. History otherwise good.

Previous history.—Nothing remarkable. No history of syphilis.

Present illness.—About one year ago face became suddenly white and puffy, and at same time he suffered from vomiting. Has had pains in chest since and felt otherwise weak and ill. Has had no hæmorrhage.

On admission he was well nourished, but intensely anæmic. Eyelids œdematous, and legs slightly so. Pulse 114, weak, compressible. Hæmic murmur at base of heart. Temp. 100·2°. Urine normal. It was subsequently noted that the white corpuscles were not in excess in the blood, that the urine on one occasion contained a trace of albumen, but on other occasions was normal, that the spleen was enlarged, and that there was a hæmorrhage into one of the retinae. The day before his death he complained of pain below left ribs, and became delirious, passing his evacuations in bed. The temperature throughout was somewhat elevated, but the highest point reached was 101·7°, two days before death.

Post mortem.—Body exceedingly well nourished. No hæmorrhages. Heart generally enlarged. Showed well-marked fatty degeneration. Spleen large. No other remarkable appearance. Condition of blood not noted.

VI.—ERYTHEMA NODOSUM.

Eight cases, all females. Youngest 9, eldest 30. In all cases there was more or less fever, the highest temperature noted being 103·6°. In two cases spots were noticed on the arms as well as the legs. In three cases there was tonsillitis accompanying the eruption, in two there was a systolic murmur at the apex of the heart, in two a family history of rheumatism, and in one, which ensued on confinement, there was complete alopecia and a mammary abscess.

VII.—BRONCHOCELE.

Fatal case was a female, aged 33. Had had the swelling ever since she could remember, but it had increased rapidly during last four months, and for two months she had been subject to spasmodic attacks of dyspnoea, has lost her voice, and has fits of choking when she swallows. On admission had a large broncho-

cele in neck, mainly in left side, and which presented what appeared to be fluctuating spots. Voice hoarse, breathing stridulous, left vocal cord paralysed. One of the fluctuating spots was punctured with a trocar, but nothing came away. About a fortnight after admission she was seized with a violent fit of dyspnœa. Free incisions were made into the gland, with the effect of causing a copious flow of blood, and the discharge of some grumous matter, apparently from a cyst in interior of tumour. Trachea could not be felt by finger. Patient was much relieved. For about six weeks she continued free from violent spasmodic attacks, there was a good deal of discharge from the wounds, and slight occasional rise of temperature. Eventually she was seized with a second violent attack of dyspnœa; incision was again made into the tumour; the trachea was with great difficulty found. It was much flattened; a tube was introduced, but the patient had ceased to breathe.

VIII.—EXOPHTHALMIC GOITRE.

Fatal case.—A female, æt. 30. Eyes noticed to be prominent for four years. During same period had suffered from great palpitation. Swelling of neck noticed for eighteen months, and has been increasing ever since. Has been subject to fits of dyspnœa quite lately. Catamenia have always been irregular, and for the last two years absent entirely.

On admission, the breathing was stridulous and the heart's action excited, but there was no murmur. There was great exophthalmus and a large bronchocele in neck. The breathing continued stridulous, and four days after admission she was seized with a sudden fit of dyspnœa and died.

Post mortem.—The bronchocele was found to consist of the greatly enlarged thyroid, the extremities of which surrounded and constricted the trachea and œsophagus, meeting behind. The thymus also was of unusually large size. Nothing remarkable in the other organs.

IX.—CEREBRO-SPINAL MENINGITIS.

One case, fatal.

A. G—, æt. 4. Admitted November 5th; died November 11th. Measles two months ago. On October 29th stayed away from school on account of headache, since then confined to bed. Delirium since the 30th. Screams constantly. Passes water in bed. No fits.

On admission she was very drowsy, almost unconscious, only screaming when touched. No paralysis, and no discharge from ears. Temp. 99°. Whilst in the hospital patient had a number of opisthotonic convulsions, during which the pupils were widely dilated. There was occasional vomiting. Temperature generally normal, 101·6° on day of death.

Post mortem.—Lungs, heart, kidneys, liver, spleen, all healthy. Brain: large quantity of clear subarachnoid fluid; thick layer of lymph adherent to base, and under surface of cerebellum. No meningitis of convexity. No inflammation in fissure of Sylvius and no tubercles. Great brunt of disease had fallen

on ventricles, which were greatly distended, and ependyma excessively congested, innumerable vessels running over it. They contained thick viscid lymph. Fourth ventricle contained same matter. Fornix, corpus callosum, &c., all ploughed up. Brain substance very vascular. The cord between dura and pia mater covered with layer of thick lymph. Canal and substance fairly normal. No bone disease or other cause for the meningitis.

X.—PLEURISY WITH EFFUSION.

Twenty-five cases: 18 males and 7 females. In 10 the effusion was on the right side, in 13 on the left, and in 2 on both. In 15 cases aspiration was resorted to with success, 8 oz. being the smallest, and 109 oz. the largest amount withdrawn. In 3 cases the operation had to be done a second time, and in 1 case it was done three times. In 1 case both pleuræ were tapped, in the other case in which both pleuræ were affected there was intense inflammation with effusion of plastic lymph, the case terminating fatally. With this exception, and 1 other case in which there was a suspicion of phthisis, all the cases were cured. The average amount of fluid withdrawn at each tapping was 43·7 oz. For empyema, *vide* Special Table.

MEDICAL REPORT.

1881.

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MEDICAL REGISTRAR.

PREFACE.

THE same general plan has been adopted as in last year's Report. The general medical statement, the general table of diseases, the table of infectious cases arising in the hospital, and the tables showing the complications of acute rheumatism and chorea, are all precisely similar to those in last year's Report. The same is the case with the table of cases of ulcerative endocarditis and cerebral hæmorrhage and softening. The cases of abdominal aneurysm, cerebral tumour, and empyema, were either not sufficiently numerous or complete to warrant their being tabulated this year, as would otherwise have been done; it being felt that the adoption of a uniform series of special tables by successive Registrars, at the same time that it would greatly enhance the value of the Reports, would facilitate the work of the Registrar. The cases of intestinal obstruction occurring during the year appeared to possess several points of interest, and consequently a special table has been added showing their more prominent features.

TABLE I.—*General Medical Statement.*

Number of Medical Beds ...	...	...	...	...	191
Number of patients in Medical Wards, Jan. 1st, 1881 ...		Males.		Females.	Total.
70	...	87	...	157	
„ „ admitted during the year 1881 ...	796	...	892	...	1688
Total ...	866	...	979	...	1845
„ „ in Medical Wards, Dec. 31st, 1881...	74	...	90	...	164
„ „ treated to a termination during 1881	792	...	889	...	1681
„ „ discharged or died during 1881:					
	Males.		Females.		Total.
Cured ...	243	...	340	...	583
Relieved ...	320	...	414	...	734
Unrelieved or other causes ...	37	...	23	...	60
Died ...	192	...	112	...	304
Total ...	792	...	889	...	1681
Average number of days of each patient's stay in hospital—35·7.					

TABLE II.—General Table of Diseases.

DISEASE.	Number of casts.		Age.							Average number of days in hosp.		Cured.		Re- lieved.		Unre- lieved.		Died.		REMARKS.	
	Total.		Under 5							Cases.		M. F.		M. F.		M. F.		M. F.			
			Over 60																		
I. GENERAL DISEASES.																					
Rötheln . . .	1	1								5	...	1	...	...	...	...	...	...	...	A house physician.
Measles . . .	16	9								27	...	9	7	...	...	...	...	...	...	14 cases arose in hospital; 13 were children, and 1 a nurse.
Variola . . .	3	1								10	...	...	1	...	1	1	...	...	...	2 transferred to the Smallpox Hos- pital.
Varicella . . .	1	1								15	...	1	...	...	...	...	...	...	...	The majority arose in hospital (<i>vide</i> Special Table).
Scarlet fever . . .	20	10								29	4	9	9	...	...	...	1	1	...	
{ Rheumatism Nephritis Noma . . . Typhus . . .	2	2								33	...	...	2	...	...	...	...	...	...
	7	7								48	4	5	...	...	...	...	2	...	...
	1	1								216	...	1	...	...	...	...	...	...	...
	1	1								...	15	...	...	...	...	...	...	1	...	
Enteric . . .	99	58	4	12	36	34	10	1	2	52	11	50	36	...	...	...	8	5	...	5 cases fatal from perforation of bowel, which in 2 took place before admission; 8 died with lung com- plication; no death from hæmor- rhage; 1 case which recovered was complicated with acute nephritis.
Febricula . . .	16	8	1	5	7	...	3	...	...	13	...	8	...	...	...	...	...	...	...	In 1 fatal case early interstitial nephritis; in 1 intense congestion of membranes of brain.
Intermittent fever . . .	11	10	1	...	1	4	4	1	1	18	...	10	1	...	...	...	...	...	...
Erysipelas . . .	18	11	7	...	4	4	2	8	...	28	3	10	6	...	...	...	1	1	...	
Pyæmia . . .	2	...	2	...	1	...	1	...	...	...	9	...	...	...	...	...	...	...	2	In 1 disease of ear and thrombus of petrosal sinus; in the other puer- peral thrombosis and septicæmia.

Diphtheria and croup	14	10	4	10	1	2	1	...	...	...	46	10	4	2	...	...	...	6	2
Post-diphtheritic paralysis	1	1	...	1	...	1	...	...	...	...	...	4	...	...	...	...	1	...	12 laryngeal cases; tracheotomy in all, 4 recovering; of the faucial cases, 1 a house surgeon, 1 a nurse; both recovered
Pertussis	1	1	...	1	...	...	...	...	...	...	2	...	...	...	...	...	1	...	Died suddenly, apparently from syncope.
Parotitis	3	3	...	...	2	1	...	...	...	...	15	...	...	...	...	...	...	...	2 cases complicated with orchitis.
Acute rheumatism	155	80	75	...	152	70	22	8	2	...	27	...	44	32	36	43	...	...	7 cases were readmissions.
Subacute rheumatism	22	10	12	...	7	6	4	1	3	1	21	...	8	11	2	1	...	...
Gonorrhoeal rheumatism	3	3	...	...	...	1	2	...	...	...	43	...	...	...	3	...	...	...
Chronic rheumatic arthritis	4	...	4	...	...	1	2	1	...	...	36	...	...	...	...	4	...	...
Gout	10	10	...	...	...	2	4	1	3	...	46	...	...	...	10	...	...	...
Strumous arthritis	1	...	1	...	...	1	...	...	...	...	57	...	...	...	...	1	...	...
Lumbago	2	...	2	...	...	1	...	...	1	...	13	...	...	2	...	...	...	...
Syphilis	7	5	2	...	1	1	2	2	1	...	30	...	...	...	5	1	...	1	The fatal case congenital (<i>vide</i> also Diseases of Brain, Cord, and Liver).
Rickets	3	2	1	3	...	...	...	...	...	...	17	4	...	...	...	1	2	...	In 1 fatal case the brain much wasted, with excess of subarachnoid fluid; in the other collapse of lungs.
Myxœdema	2	...	2	...	...	2	...	...	...	...	60	7	...	...	...	1	...	1	No gross lesion found in any fatal case P.M.
Diabetes	7	6	1	...	1	3	2	1	...	...	130	23	...	...	3	1	...	3	
Scorbutus	1	1	...	...	...	...	1	...	...	1	...	8	...	...	...	...	1	...	The boy a rheumatic case; the other transferred to surgical for stricture.
Purpura	2	2	...	...	1	...	...	...	1	...	43	...	1	...	1	...	...	...
Anæmia	15	3	12	...	5	5	...	3	2	...	25	90	1	11	2	...	...	1	The fatal case one of pernicious anæmia; 1 case was associated with jaundice.
Leucocythæmia	2	...	2	...	...	...	1	1	...	...	45	...	...	...	...	2	...	...
Lymphadenoma	3	3	...	...	1	1	1	...	...	...	32	60	...	...	2	...	...	1	
General tuberculosis	11	5	6	4	2	1	3	1	...	...	27	13	...	...	1	1	...	4	6 cases probably of sarcoma, the others carcinoma; in 5 the disease originated in the mamma, and in the testis in 2.
Malignant disease	15	6	9	...	1	3	4	4	2	1	47	27	...	...	1	5	...	5	

Acute bronchitis . . .	20	9	11	5	2	2	4	6	1	...	18	...	9	11	...	...	...	...	...	5	Average weight of heart in fatal cases 17·7 oz.; liver nutmeg in 6; early interstitial nephritis in 2.
Chronic bronchitis and emphysema	39	19	20	...	...	...	...	7	8	14	10	28	10	...	17	15	...	...	2	5	In 1 uniform dilatation, in the others confined to one lung; in 1 amyloid disease of viscera.
Bronchiectasis . . .	3	2	1	...	...	...	...	1	...	1	...	...	15	...	...	...	...	...	2	1	The disease commenced at the apex in 16 cases, 5 of which died; mitral regurgitation in 2.
Croupous pneumonia	60	45	15	1	7	19	14	6	6	5	2	24	4	33	12	...	2	...	12	1	2 cases fatal from hæmoptysis, due in 1 to rupture of small aneurysm in cavity at apex of lung; in 1 peritonitis from rupture of floor of tubercular ulcer; in 1 adherent pericardium; in 1 cirrhosis of liver.
Catarrhal pneumonia	13	7	6	13	...	...	...	...	...	...	...	15	2	3	4	...	...	...	4	2	In 8 due to phthisis; in 4 no signs of disease on discharge.
Phthisis . . .	65	40	25	...	1	7	25	16	10	4	2	16	26	...	23	16	...	...	17	9	On left in 2; all dependent on phthisis, early in 2 and advanced in 1 case.
Hæmoptysis . . .	12	10	2	...	...	1	8	3	...	...	...	18	...	3	1	7	1	...	...	...	Paracentesis in 12; in 1 new growth was suspected.
Pneumothorax . . .	3	3	...	...	...	1	1	...	...	1	...	14	...	...	...	...	...	...	3	...	In 1 the empyema had burst through the lung before admission; in 1 there was phthisis, and in 1 disease of joint and subsequent pyæmia.
Pleurisy with effusion	15	11	4	2	...	2	3	4	2	1	2	32	...	10	4	1	...	...	...	...	The fatal case very acute with effusion of plastic lymph.
Empyema . . .	6	4	2	1	2	1	...	...	2	...	...	84	46	1	2	1	...	...	2	...	In 2 fatal cases no P.M.; in 1 growth at root of lung compressing superior vena cava; in non-fatal case paralysis of left vocal cord.
Dry pleurisy . . .	15	3	12	...	...	3	6	2	3	1	...	25	14	3	11	...	...	...	...	1	
Intra-thoracic tumour	4	3	1	...	...	1	1	2	...	...	...	68	32	...	...	1	...	...	3	...	

TABLE II—*continued.*

DISEASE.	Number of cases.		Age.							Average number of days in hosp.		Cured.		Re-lieved.		Unre-lieved.		Died.	REMARKS.	
	Total.	M. F.	Under 5	5-10	10-20	20-30	30-40	40-50	50-60	Over 60	Cases.		M. F.	M. F.	M. F.	M. F.	M. F.			
											Non-fatal.	Fatal.								
IV. DISEASES OF THE ORGANS OF CIRCULATION.																				
Pericarditis . . .	1	1	1	...	...	1	...	...	...	...	...	38	...	1	...	...	...	...	Probably rheumatic.
Palpitation of the heart .	1	1	1	...	...	...	1	...	...	...	...	36	...	...	...	1	...	...
Angina pectoris . . .	1	1	...	...	...	...	...	1	...	...	...	8	...	...	...	1	...	...
Fatty degeneration of heart . . .	1	1	1	...	...	...	...	...	...	1	...	24	...	...	...	...	...	1	
Hypertrophy of heart . .	1	1	...	...	...	...	...	1	...	...	...	20	...	...	...	...	...	1	Anasarca; cystitis.
Malformation of heart . .	5	4	1	1	1	...	2	1	...	...	...	32	96	...	1	1	...	2	
Ulcerative endocarditis . .	2	2	...	...	...	...	...	...	2	...	...	...	30	...	...	...	...	2	1 case fatal from cerebral hæmorrhage; in this also recent ulcerative endocarditis; in 1 abscess of brain, which had burst into ventricles.
Chronic valvular disease of heart . . .	76	37	39	...	1	7	23	16	19	3	7	36	44	...	27	27	...	10		12
Analysis. { Aortic and mitral . . .	20	13	7	1	7	5	5	...	2	30	46	...	6	3	...	7		4
	10	7	3	4	1	4	...	1	28	7	3
Thoracic aneurysm . . .	46	17	29	...	1	6	12	10	10	3	4	52	42	...	14	21	...	3	8	
	16	13	3	...	...	...	3	5	3	4	1	82	32	...	5	3	...	8	...
Abdominal aneurysm . . .	1	1	...	...	...	...	1	...	...	...	...	...	5	...	...	...	...	1	...
Phlebitis . . .	2	1	1	...	...	...	1	...	1	...	...	16	...	...	1	...	...	...	...

[illegible]

Cirrhosis of liver . . .	26	17	9	1	7	7	9	2	48	32	...	5	5	...	12	4	Syphilitic in 3, with amyloid spleen in 1; contracted granular kidney in 1; fusiform aneurysm of descending aorta, and small saccular aneurysm in 1; chronic phthisis in 2.
Enlarged liver . . .	2	2	...	1	...	1	...	...	22	...	...	...	...	...	...	...	In the man associated with syphilis and albuminuria; in the child with enlargement of spleen and ascites; ? cirrhotic.
Malignant disease of liver . . .	3	2	1	...	...	...	1	...	2	28	...	...	...	...	2	1	In all primary; in 1 associated with hydatids of liver and peritoneum.
Hydatids of liver . . .	3	1	2	...	...	1	1	...	96	60	...	1	...	1	...	1	In the fatal case a free opening was made, but the cyst opened into bile-ducts; in 1 successful result by opening with large trocar; 1 transferred to surgical, where cured.
Abdominal tumour . . .	5	3	2	...	...	...	1	2	84	...	...	3	2	...	...	...	All probably malignant.
" cyst . . .	1	1	...	...	...	...	...	1	70	...	...	...	...	...	1	...	Large cyst attached to, but not arising from spleen, and containing grumous fluid.
Abscess of abdominal wall . . .	1	1	...	1	...	...	...	...	44	...	1	...	...	...	...	...	Traumatic.
VII. DISEASES OF GENITO-URINARY ORGANS.																	
Acute congestion of kidneys . . .	1	...	1	...	...	1	...	...	...	2	...	...	...	...	...	1	Associated with pleurisy, pericarditis and peritonitis.
Acute nephritis . . .	16	16	...	4	4	6	2	...	46	...	...	16	...	...	...	...	Of the fatal cases 2 were large white; in the child there was mixed tubal and interstitial change; 17 were contracted granular; there was fibroid phthisis in 2, and incompetence of the mitral valve in 2.
Chronic renal disease . . .	42	25	17	1	1	7	8	10	37	28	...	9	13	...	16	4	Right kidney affected; liver amyloid; chronic peritonitis.
Strumous disease of kidney . . .	1	1	...	...	1	...	...	...	...	36	...	...	...	...	1	...	

TABLE II—continued.

DISEASE.	Number of cases.		Age.								Average number of days in hosp.		Cured.	Re- lieved.		Unre- lieved.		REMARKS.		
	Total.	M. F.	Under 5	5-10	10-20	20-30	30-40	40-50	50-60	Over 60	Cases.			M. F.	M. F.	M. F.	M. F.			
											Non-fatal.	Fatal.								
VII. DISEASES OF GENITO- URINARY ORGANS— <i>continued.</i>																				
Malignant disease of kidney?	1	1	1	...	...	...	...	1	...	...	...	52	...	...	...	1	...	...	Possibly abscess, but only blood came away on puncture.
Movable kidney	2	2	2	...	...	...	...	1	...	1	...	28	...	...	...	2	...	...	The right kidney in each case.
Pyelitis	6	3	3	...	...	...	5	1	...	...	...	43	...	...	3	3	...	...	In all probably due to calculus.
Hæmaturia	1	1	1	...	1	...	...	...	...	...	...	...	...	...	1	...	...	...	(?) Malignant of bladder.
Incontinence of urine	1	1	1	...	1	...	...	...	...	...	...	...	...	...	1	...	...	...
VIII. DISEASES OF THE NER- VOUS SYSTEM.																				
Simple meningitis	1	1	1	30	1	...	Of base of brain.
Tubercular meningitis	4	4	3	1	...	...	...	...	...	...	...	27	7	...	...	...	1	...	1 very chronic case removed by friends; in 2 no P.M.; in 1 no tubercle elsewhere, but bronchial glands caseous.
Hemiplegia	36	19	17	...	...	...	6	9	8	10	3	42	...	...	...	19	17	...	21 on right side, 13 on left; in 2 both sides were affected; in 2 there was epilepsy; in 1 post-hemiplegic chorea; in 1 hemiopia, and in 1 monocular diplopia.
Cerebral hæmorrhage	7	4	3	2	2	2	1	4	4	3	In 3 into right, in 2 into left corpus striatum; in 1 on to surface of brain; in 6 there were contracted granular kidneys, and in 1 valvular disease of heart.

" softening .	.	2	2	...	...	...	1	...	1	...	4	...	...	...	...	2	...	In 1 thrombus of left middle cerebral artery; in the other of both; 1 patient had evidence of gum-mata in kidneys, and the other had recently suffered from secondary syphilis.	
" tumour .	.	6	3	3	...	...	2	1	2	1	64	...	...	2	3	...	1	In fatal case tumour in right temporo-parietal region.	
Injury to brain .	.	2	1	1	...	...	1	1	...	...	38	...	...	...	...	1	1	In 1 softening of brain, especially frontal lobes, from old injury; in the other laceration from fracture of base of skull.	
General paralysis of insane	in-	5	3	2	...	...	2	2	...	1	58	...	...	...	...	3	2	...	1, a well-marked case, was a female, æt. 23; 1, male, was removed to asylum, and died shortly afterwards; in 1 there was aortic regurgitation; 1 was possibly a case of malingering.
Acute mania .	.	5	2	3	...	...	3	2	...	...	7	...	...	1	...	3	1	...	1 case cured; onset during lactation, and attended with transient amblyopia.
Melancholia .	.	5	4	1	...	...	...	1	2	...	5	...	...	...	...	4	1	...	
Cephalalgia .	.	3	1	2	...	...	...	3	...	...	18	...	...	1	2	...	...	...
Megrim .	.	1	1	1	...	...	...	1	...	...	26	...	...	1	...	1	...	...
Sunstroke .	.	1	1	...	...	...	...	...	1	...	10	...	...	1	...	...	...	...
Paralysis agitans .	.	1	1	...	...	...	...	...	...	1	42	...	...	...	1	...	...	...	In 1, male, inspiratory spasm; in 1 transient aphasia; in 8, females, fits; in 2 paraplegia; in 2 hemianæsthesia; in 1 spinal disease, and in 1 hip disease was simulated; in 1 there were choreiform movements, and in 1 catalepsy.
Epilepsy .	.	24	15	9	...	...	1	5	10	3	16	...	...	...	15	9	...	...
Hysteria .	.	20	2	18	...	...	7	9	3	1	28	...	...	...	2	18	...	...
Chorea .	.	14	4	10	...	...	3	10	1	...	36	...	4	10	...	...	...	...
Choreiform movements .	.	1	1	...	...	...	...	...	1	...	39	...	...	...	1	...	...	...

In 1, male, inspiratory spasm; in 1 transient aphasia; in 8, females, fits; in 2 paraplegia; in 2 hæmi-anæsthesia; in 1 spinal disease, and in 1 hip disease was simulated; in 1 there were choreiform movements, and in 1 catalepsy.

TABLE II—*continued.*

DISEASE.	Number of cases.		Age.								Average number of days in hosp.		Cured.		Re- lieved.		Unre- lieved.		REMARKS.
	Total.	M. F.	Under 5	5-10	10-20	20-30	30-40	40-50	50-60	Over 60	Cases.		M. F.	M. F.	M. F.	M. F.	M. F.		
											Non-fatal.	Fatal.							
VIII. DISEASES OF THE NERVOUS SYSTEM—continued.																			
Paraplegia . . .	15	9 6	1	...	5	4	3	2	98	78	...	5	5	...	4	1	In 4 fatal cases myelitis with surgical kidneys, and in 1 of them amyloid disease from syphilis; in 1 no P.M.; of non-fatal cases, 2 due to caries of spine; 1 occurred during the course of secondary syphilis.
Acute anterior poliomyelitis . . .	2	1 1	1	1	118	1	1	Both old cases.
Infantile paralysis . . .	2	2	...	2	...	...	...	...	...	...	78	...	...	2	...	...	...	...
Progressive muscular atrophy . . .	4	3 1	1	2	1	58	3	1	In 1 also bulbar paralysis.
Locomotor ataxy . . .	10	8 2	1	2	5	1	1	84	8	2	In 1 there was Charcot's disease of shoulder-joint.
Disseminated sclerosis . . .	5	4 1	1	2	2	40	4	1	In 1 probably primarily cerebral, and associated with epilepsy.
Lateral sclerosis . . .	2	2	...	...	2	...	...	...	...	...	14	...	...	...	2	...	...	...
Bulbar paralysis . . .	1	1	...	...	...	...	...	1	...	...	48	...	...	...	1	...	...	...
Ophthalmoplegia externa	1	1	...	...	...	...	1	...	...	...	32	...	...	...	1	...	...	...
Paralysis of 3rd nerve . . .	1	1	...	...	...	...	...	...	1	...	8	...	...	...	1	...	...	...
" 7th . . .	1	1	...	1	...	...	...	...	...	...	24	...	...	...	1	...	...	...
Facial neuralgia . . .	4	1 3	...	1	...	1	1	1	...	...	17	...	1	3	...	...	...	...
Brachial neuralgia . . .	2	2	2	62	2	In 1 associated with herpes, and probably due to disease of spine.
Pleurodynia . . .	2	2	...	...	...	...	...	2	...	...	14	...	...	2	...	...	...	...
Sciatica . . .	7	3 4	...	...	...	2	2	1	2	...	28	...	...	3	4	...	...	...

IX. POISONING.

Alcoholic	12	5	7	...	1	5	3	2	1	9	7	2	2	1	4	...	2	1	In 1 fatal case fits, with much pyrexia; in 1 great prostration with delirium, but without pyrexia; in 1 moderate pyrexia. Of non-fatal cases 4 were cases of delirium tremens; 5 chronic cases.
Lead	9	8	1	...	1	3	2	3	...	46	...	5	...	3	1	...	...	3	3 were painters, 1 a plumber, and 3 employed in lead works; in 1 male and 1 female the source was not obvious; in 5 colic; in 3 gout; in 3 palsy, and in 1 acute mania.
Mercurv.	1	1	...	...	1	...	...	...	...	4	...	1	...	...	...	...	...	1	Chronic case; false membrane found on mucous membrane of stomach P.M.
Hydrochloric acid	1	1	1	...	...	...	...	...	...	90	...	...	...	...	...	...	1	...	
Ammonia	2	2	...	...	1	1	...	...	...	6	...	2	...	...	...	...	...	...
Petroleum	1	1	1	...	1	...	...	...	...	4	...	...	1	...	...	...	...	...
Phosphorus	1	1	1	...	1	...	...	...	...	14	...	...	1	...	...	...	...	...
Iodine	1	1	1	...	1	...	...	...	...	4	...	...	1	...	...	...	...	...
Opium	3	2	1	...	...	2	1	...	...	7	...	2	1	...	...	...	...	...
Strychnia	1	1	...	...	...	1	...	...	...	2	...	1	...	...	...	...	...	...

X. MISCELLANEOUS.

Immersion	6	4	2	...	1	2	2	...	1	4	...	4	...	...	...	...	...	...
Disease of ear	2	1	1	...	...	1	1	...	...	18	...	...	1	...	...	...	...	...
" spine	3	1	2	...	1	...	...	1	...	28	...	1	2	...	...	...	...	...
Debility	16	...	16	...	3	5	7	1	...	13	...	...	16	...	...	...	...	...	In 1 feigned hemiplegia with contraction; in the other severe pain in the back.
Malingering	2	2	...	...	...	...	...	1	1	56	...	...	...	2	...	...	...	...

XI. DISEASES OF THE FEMALE ORGANS OF GENERATION.

1. *External Generative Organs*

Imperforate hymen	1	...	1	...	...	...	...	...	...	20	...	...	1	...	...	...	...	...
Vaginitis	3	...	3	...	...	1	2	...	...	14	...	...	3	...	...	...	...	...

TABLE II—*continued.*

DISEASE	Number of cases.		Age.							Average number of days in hosp.		Cured.		Re- lieved.		Unre- lieved.		REMARKS.	
	Total.																		
	M.	F.	Under 5	5-10	10-20	20-30	30-40	40-50	50-60	Over 60	Non-fatal.	Fatal.	M.	F.	M.	F.	M.		F.
XI. DISEASES OF THE FEMALE ORGANS OF GENERATION.																			
1. <i>External Generative Organs</i>																			
<i>—continued.</i>																			
Hæmatoma of labium .	1	1	1	1	10	...	1	Amputation of cervix in 2. In 1 also granular os and vaginitis. In 2 retroflexion. 1 was an epileptic.
Abscess of labium .	1	1	1	...	...	...	1	...	...	...	5	...	1	...	...	...	...	In 1 prolapsus, in 2 stenosis of os. In 1 laceration of os. Retroflexion in 1; granular os in 1; endometritis in 2.
Syphilitic sore of labium .	1	1	1	1	2	1		
2. <i>Uterus.</i>																			
Stenosis of os .	4	4	4	...	...	1	2	1	...	...	17	...	...	4	...	...	...	In 1 prolapsus, in 2 stenosis of os. In 1 laceration of os. Retroflexion in 1; granular os in 1; endometritis in 2.
Elongation of cervix .	3	3	3	...	1	1	1	42	...	2	1		Cystitis in 1.
Laceration of cervix .	2	2	2	2	1	1	18	...	2		
Prolapsus uteri .	5	5	5	...	...	2	1	1	...	1	22	...	...	5	...	...	...	Cystitis in 1.
Anteversio uteri .	3	3	3	2	1	28	3		In 1 prolapsus, in 2 stenosis of os. In 1 laceration of os. Retroflexion in 1; granular os in 1; endometritis in 2.
Anteflexio uteri .	11	11	11	8	2	1	...	19	11		
Retroflexio uteri .	20	20	20	...	...	2	10	4	2	2	16	...	...	20	...	...	...	In 1 prolapsus, in 2 stenosis of os. In 1 laceration of os. Retroflexion in 1; granular os in 1; endometritis in 2.
Retroversio uteri .	2	2	2	2	20	...	2		Cystitis in 1.
Subinvolutio uteri .	5	5	5	...	1	3	1	28	5		
Granular os .	3	3	3	...	...	...	1	2	...	...	18	...	3	...	...	...	...	Cystitis in 1.
Endocervicitis .	3	3	3	2	1	32	...	3		In 1 prolapsus, in 2 stenosis of os. In 1 laceration of os. Retroflexion in 1; granular os in 1; endometritis in 2.
Endometritis .	12	12	12	5	3	4	...	28	...	4	8		
Parametritis .	33	33	33	...	3	20	9	1	...	...	22	...	33	...	...	...	...	In 1 prolapsus, in 2 stenosis of os. In 1 laceration of os. Retroflexion in 1; granular os in 1; endometritis in 2.
Pelvic abscess .	2	2	2	1	1	96	2	...		Cystitis in 1.
Polypus of cervix .	1	1	1	1	52	...	1		
Polypus of uterus .	4	4	4	...	...	...	2	2	...	...	32	...	4	...	...	...	...	In 1 prolapsus, in 2 stenosis of os. In 1 laceration of os. Retroflexion in 1; granular os in 1; endometritis in 2.
Fibroid of uterus .	8	8	8	1	5	2	...	17	7	1		In 1 prolapsus, in 2 stenosis of os. In 1 laceration of os. Retroflexion in 1; granular os in 1; endometritis in 2.

[illegible]

TABLE III.—*Cases of Infectious Diseases originating in Hospital.*

Initials.	Sex.	Age.	Disease for which admitted.	Disease originating in hospital.	Date of attack.	Result.	Remarks.
T.D.A.	M.	29	—	Rötheln .	April 16	C. April 20	A house physician.
H.H.	M.	4	Burn .	Measles .	Jan. 17	C. Feb. 15	From Victoria Ward.
E.P.	F.	2	Fractured ribs .	Ditto .	March 20	C. April 12	Ditto.
R.B.	M.	3	Hip disease .	Ditto .	April 5	C. April 17	Ditto.
A.H.	M.	3	Abscess of thigh .	Ditto .	April 15	C. May 4	Ditto.
H.G.S.	M.	3	Rickets .	Ditto .	April 15	C. May 12	Ditto.
G.C.	M.	2	Hip disease .	Ditto .	April 15	C. May 31	Ditto.
W.H.	M.	3	Hypospadias .	Ditto .	April 15	C. June 1	Ditto.
A.A.	M.	1	Talipes .	Ditto .	April 16	C. May 24	Ditto.
R.J.P.	M.	8 m.	Nævus .	Ditto .	May 15	C. June 1	From Elizabeth Ward.
S.G.	F.	3	? .	Ditto .	May 26	C. July 3	From Victoria Ward.
A.F.	F.	30	—	Ditto .	Oct. 30	C. Dec. 2	A hospital nurse, who had been attending a case of measles.
F.B.	F.	1	Nævus .	Ditto .	Nov. 1	C. Dec. 16	
M.H.	F.	21	? .	Scarlet fever .	Dec. 21, 1880	C. Jan. 22, 1881	From Christian Ward.
A.W.	F.	6	Rheumatism .	Ditto .	Jan. 17, 1881	C. Feb. 27, 1881	Ditto. Admitted for acute rheumatism, which proved to be post-scarlatinal.
J.W.	F.	28	Ophthalmia .	Ditto .	Feb. 14	C. March 26	Originated in No. 8 Block.
A.D.	F.	16	? .	Ditto .	April 6	C. April 14	From Alexandra Ward. A doubtful case.
— F.	F.	?	—	Ditto .	May 8	C. June 24	A hospital nurse.
W.F.	M.	19	Varicocele .	Ditto .	May 26	C. June 1	From Leopold Ward.
H.F.H.	M.	4	Hip disease .	Ditto .	July 5	C. August 4	From Edward Ward.
H.J.H.	F.	2	Do. .	Ditto .	Aug. 18	C. Dec. 3	From Victoria Ward.
E.W.H.	M.	5	Injury to hand .	Ditto .	Aug. 19	C. Oct. 25	Ditto.
F.M.	F.	2	Abscess of neck .	Ditto .	Aug. 19	C. August 28	Ditto.

I. P.	F.	9	Burn .	.	.	Ditto .	.	Aug. 26	C. Dec. 3	?
H. M.	F.	28	—	—	—	Enteric fever .	.	May 9	C. July 22	Nurse in hospital.
M. H.	F.	24	—	—	—	Ditto .	.	Aug. 18	C. Oct. 7	Ditto.
J. G.	F.	32	—	—	—	Ditto .	.	Aug. 21	C. Oct. 9	Ditto. This case was complicated with acute nephritis, and albumen remained at time of discharge.
J. B. W.	F.	24	—	—	—	Diphtheria .	.	May 28	C. June 30	A hospital nurse. A pharyngeal case. Paralysis ensued after patient left the hospital.
F. W. M.	M.	23	—	—	—	Ditto .	.	Oct. 14	C. Nov. 2	A house surgeon. A mild pharyngeal case.

TABLE VI.—*Abstract of Fatal Cases of Ulcerative Endocarditis, in which a post-mortem was made.*

Initials, age, and sex.	Occupation.	Admitted.	Died.	Previous history.	General symptoms and progress.	Condition of heart and circulation.	Condition of urine.	Post-mortem appearances and remarks.
J. R., 41, F.	Laundress, married	June 15	July 1	Has never had acute rheumatism, scarlatina, or chorea. Is married, and has 2 children alive and well. There is a doubtful history of syphilis. Eighteen years ago, when in a hospital for a miscarriage, heart was examined and said to be diseased. Since then has broken down much. Out-patient of this hospital for nearly 4 years. In-patient last Christmas; then had rigors with very high temperature—once 106.5°—occasional vomiting, and much pain in region of spleen.	On admission complains of shortness of breath, pain in head, and occasionally in ankles. Has some cough; spits blood at times. Respiration hurried; pupils equal, no numbness or paralysis; temp. 101.8°. June 28th.—Cough very troublesome; crepitation at bases of lungs; no shivering; no great rise of temperature. 30th.—No inequality of pupils; much cough; expectoration scanty, tinged with blood. Temperature last night 102.8°. July 1st.—Had a convulsion, became unconscious, and died at 4 p.m. Temperature in the morning 103.8°.	Hypertrophied on both sides about equally. Marked thrill to left of sternum, over pulmonary area. Loud rough systolic murmur conducted to left. Softer diastolic murmur heard most plainly about the middle of the sternum. Right radial pulse much stronger than left. The same signs remained throughout.	June 15th.—Sp. gr. 1020, no albumen. 23rd.—Sp. gr. 1024, no albumen.	Heart weighed 14½ oz. No patency of ductus arteriosus; no perforation of septa. Both ventricles hypertrophied; auricles normal. Mitral valve competent; aortic valve admitted free regurgitation; much ulcerated and eroded, and with old and recent vegetations attached. Pulmonary valve competent. Circular ulcer on one flap. Behind valve the conus was constricted for about half an inch, and its walls were there thick and fibrous, and showed some recent ulceration. Tricuspid valve not remarkable. Lungs contained no infarcts. Spleen contained several old infarcts. Kidneys: one small recent infarct. Brain: hæmorrhage into left ventricle from rupture of small aneurysmal dilatation of branch of posterior cerebral artery situated at

A.W., 43, M.	Tin-plate worker	July 22 Aug. 24	<p>Family history very good. Acute rheumatism when 18 years old, and again 4 years ago. Then laid up for 3 months. Has been gradually getting weak and depressed for the last year. About a fortnight ago felt a sudden chill, vomited all night and next day, had much diarrhoea, cough, much pain in chest, much expectoration of dirty rusty-coloured sputum. This disappeared, but he remained weak and unable to walk or move from bed.</p>	<p>On admission pale, thin; chest narrow. Lungs: under right clavicle some dulness and crepitation; at back signs of pneumonia over upper half of same lung, and friction at base. Thought to be pneumonia in process of resolution. Resp. 28; appetite fair; tongue red and cracked; hepatic and splenic dulness normal; temp. 98.2°. July 28th.—Seemed to have improved somewhat till to-day he had a slight rigor; temp. 100.8°. 29th.—Considerable dyspnoea, sweating much. 30th.—Severe rigor; temp. 105.4°; sweating profusely. Aug. 6th.—Another rigor; temp. 104.5°. Signs in right lung much the same; has pain in left side, where is some pleuritic friction. Got much weaker. 23rd.—In a semi-conscious state. 24th.—Died at 4 a.m. Temperature since last note has varied from 97° to 103.6°.</p>	<p>July 22nd.—Impulse cannot be seen or felt. Dulness not increased. Sounds normal, but weak. Pulse 90, weak. Aug. 12th.—Systolic blowing murmur at apex. 13th.—Murmur at apex louder and more prolonged; also systolic and diastolic murmur at base. 19th.—Murmurs the same; pulse "water hammer."</p>	<p>July 26th.—Sp. gr. 1020, a little mucous, no albumen.</p>	<p>Body much emaciated. Patch of old adhesion between layers of pericardium. Heart 14½ oz., slightly hypertrophied. Aortic and mitral valves incompetent; large masses of friable vegetations on each, not removed to look for ulceration. Right pleura adherent throughout; left normal. Right lung consolidated and friable in upper half; no softening; left very cedematous. Spleen very large, contained many fairly recent infarcts. Kidneys generally normal, contained one or two small infarcts. Brain: convolutions flattened; ventricles contained excess of serum. Their boundaries were somewhat soft generally, especially posterior part of floor of left ventricle, corresponding to branch of posterior cerebral artery, which was blocked by firm thrombus. No aneurysms detected.</p>	<p>bottom of sulcus, just behind posterior cornu of ventricle.</p>
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TABLE VI—*continued.*

Initials, age, and sex.	Occupation.	Ad- mitted.	Died.	Previous history.	General symptoms and progress.	Condition of heart and circulation.	Condition of urine.	Post-mortem appearances and remarks.
G. L., 40, M.	Chair- maker	Aug. 10	Sep. 14	Father died of consumption. Family history otherwise not remarkable. Health generally good. Small-pox when 23. Rheumatic fever when young. Present illness began suddenly in the evening 3 days before admission with giddiness, shivering, and sickness, and then pain in the right side and cough.	Patient rather thin. Has constant cough, with yellow viscid expectoration. Left lung normal; signs of pneumonia over upper half of right. Resp. 42; tongue red and coated; spleen and liver normal; temp. 103°. Aug. 12th.—Same signs in right lung; sputa rusty; bowels loose. 14th.—Bowels loose; motions pale; sordes on lips; no enlargement of spleen. 15th.—Tongue still coated. Temperature on evening of this day for the first time normal; has varied from 100° to 103.5°. Dry rhonchus over both lungs. Temperature remained about normal till August 30th, when severe rigor; temp. 105.2°. Sept. 5th.—Still very weak; temperature constantly more or less elevated; coarse crepitation over right back; much sweating. 14th.—Temperature has been 104.8°; no distinct shivering, but much sweating. Had two epileptiform fits, and died at 10.30 a.m. Temp. 100°.	Aug. 10th.—Impulse neither seen or felt. No absolute cardiac dullness; sounds weak and indistinct. Pulse 100, weak. 14th.—30th.—Pulse 90 to 100, weak. 31st.—Short musical systolic murmur, more intense over fourth left costal cartilage; apex beat not felt. Sept. 5th.—Murmur more prolonged. 9th.—Murmur transmitted upwards and to right.	Aug. 10th.—Sp. gr. 1020, albumen a trace. Sept. 4th.—Sp. gr. 1025, lithates, no albumen. 8th.—Sp. gr. 1022, no albumen. 10th.—No albumen.	Body much emaciated. Both pleurae adherent. Apex of right lung consolidated. Heart 17 oz.; mitral valve normal; large friable clot attached to one of the cusps of aortic valve, causing great obstruction, but not permitting regurgitation. Spleen very large and soft, ? infarcts. Kidneys contained some old infarcts, and were otherwise normal. Brain normal.

TABLE VII.—*Cases of Cerebral Hæmorrhage and Softening in which a post-mortem was made.*

Initials, age, and sex.	Occupation.	Admitted.	Died.	History of attack.	Symptoms.	Post-mortem appearances.
E. F., 68, M.	Blacksmith	Jan. 6	Jan. 11	Doubtful history of syphilis. Two children died of inflammation of brain. Right side of face was paralysed 2 or 3 years ago. Arm and leg not affected. Never had a fit before present attack. On morning of admission, when going to work, fell in a fit, and became unconscious. Right side was paralysed and also convulsed.	Almost unconscious; has not spoken since fit. Partial loss of power on right side. Face somewhat paralysed on that side. Tongue protruded to right. Some anæsthesia of right side. Passes water in bed. Heart hypertrophied on left side. Urine, no albumen. Temp. normal. Jan. 10th.—Appears to understand, but cannot speak. Temp. 100°. 11th.—Was very violent all night; sweated profusely; temp. 103°. Died at 5 a.m.	Body rather thin; gouty deposits in toe-joints. Heart enlarged; no valvular disease; aorta very atheromatous; no vegetations on valves. Kidneys small; capsule peels off readily; numerous cicatricial depressions of cortex, probably contracted gummata, possibly infarcts. Brain: softening of corpus striatum, and optic thalamus on left side; vessels at base very atheromatous.
F. B., 21, M.	Labourer on S.-W. Railway	Jan. 7	Jan. 8	About a year ago was in hospital with scarlet fever and acute nephritis. Had then heart disease. Went to work on day of admission. Came home, felt ill, vomited, and then became insensible.	On admission insensible; convulsed several times in Casualty Room; tongue bitten, and foaming at mouth; breathing stertorous; râles all over chest; 7 oz. of urine drawn off; sp. gr. 1013, albumen and blood; pupils equal; conjunctivæ insensible; temp. not noted; loud double murmur at heart's apex; no œdema.	Body well nourished. Lungs œdematous. Heart hypertrophied; mitral valve admitted free regurgitation, and presented small vegetations. Liver "nutmeg." Kidneys large; probably a mixture of tubal and interstitial change; no infarcts. Brain: hæmorrhage into right lateral ventricle and on to surface, proceeding from uncertain source; ? aneurysm.

TABLE VII—*continued.*

Initials, age, and sex.	Occupation.	Admitted.	Died.	History of attack.	Symptoms.	Post-mortem appearances.
L. H., 50, F.	—	Feb. 20	Feb. 21	Admitted in unconscious state. No notes.	Some superficial cuts on skin of forehead and nose. No notes of condition.	Body well nourished. Lungs congested. Heart much hypertrophied on left side; valves normal; aorta atheromatous. Liver and spleen normal. Kidneys contracted, granular. Brain : hæmorrhage into surface from rupture of small aneurysmal dilatation of anterior communicating artery. Two other similar aneurysms found on branches of middle cerebral artery.
S. G., 29, F.	Servant	Mar. 9	Mar. 15	Rheumatic fever 2 years ago. Tapped in a hospital for tumour in right side of abdomen shortly after. Had a child five years ago. Fell in the street last night, struggled, and foamed at mouth.	Restless; attempts to speak but cannot; seems to have pain in head; right side paralysed. Heart hypertrophied. Hard globular tumour in right side of abdomen. Temp. normal. Urine, sp. gr. 1015, albumen half. P.m.—Very restless; much vomiting; only small quantity of urine passed; epistaxis. March 12th.—Vomiting has ceased; very noisy; answers better. 14th.—Did not recognise her friends yesterday, urine passed in bed. 15th.—Unconscious; breathing stertorous; died; temp. throughout not above normal.	Brain: extensive hæmorrhage into left corpus striatum, which had not burst through into ventricle; also extensive hæmorrhage into right half of pons Varolii. Kidneys: very advanced contracted granular; old hydatid cyst connected with right. Heart: left ventricle hypertrophied; valves normal. Two or three shrunken hydatids in liver.
R. M., 42, M.	Engine-driver	April 17	April 19	Family and previous history good. Has recently returned from India. Two days before admission lost power in left	A fat man; paralysed on left side; breathing stertorous; very restless, and quite unconscious; temp. normal; urine passed in bed. April 18th.—Much the same; is perspiring profusely.	Brain: large recent hæmorrhage into right corpus striatum, and small one into lenticular nucleus on left side; vessels at base very atheromatous. Heart somewhat hyper-

J. R., 41, F.	Married	June 15	July 1	side, and at the same time lost his speech, but was not unconscious, and wrote to a doctor. Gradually became unconscious.	—	v. Table VI. Ulcerative endocarditis	Cerebral hæmorrhage.	trophied; valves normal; aorta atheromatous. Kidneys normal.
A. W., 43, M.	Tin-plate worker	July 22	Aug. 24		—	v. Table VI. Ulcerative endocarditis	Cerebral softening.	
E. R., 55, F.	Cook	Sept. 10	Sept. 14	Has drunk freely. On the 5th fainted, and twice subsequently on different days. On the 9th fell, and was unconscious for half an hour. On recovery was found to have loss of power on left side; speech was thick, but mind clear.	On the 5th fainted, and twice subsequently on different days. On the 9th fell, and was unconscious for half an hour. On recovery was found to have loss of power on left side; speech was thick, but mind clear.	Speech slow and indistinct; complains of weakness and pains in limbs. There seems to be some left facial paralysis, and loss of power in both arms, most marked in left. Has control over rectum and bladder. Temp. 100·4° Urine contains albumen and granular casts. Sept. 12th. —Left facial paralysis is much more marked. Is drowsy and wandering. In the evening found to have right hemiplegia and facial paralysis on both sides. Became unconscious; unable to swallow; evacuations passed in bed. Temp. 101·4°. 14th. —Died. Temp. 102·8°.	Brain: vessels at base thick and patent. Firm pale clot in left vertebral artery just before junction with basilar. Rather more recent clot in left middle cerebral artery. Substence of frontal lobe much softened. In right corpus striatum was a large recent hæmorrhage. Kidneys: early contracted granular.	
W. N., 46, M.	Labourer	Sept. 21	Sept. 21	Brought to hospital at 8 a.m., having been suddenly attacked with coldness and numbness in left hand, arm, and leg.	8 a.m.—Appears conscious, answering by signs; left side is paralysed, and speech very indistinct. 10 a.m.—Unconscious; whole body rigid; pupils unequal; vomiting continuously. 11 a.m.—Continues unconscious; whole body trembling; pupils equal and dilated; breathing much embarrassed. 1 p.m.—Died. No record of temperature.	Brain: arteries at base very atheromatous. Large hæmorrhage into right corpus striatum and optic thalamus, which had burst through and filled the ventricles with blood. Kidneys: contracted granular. Heart: left ventricle hypertrophied; no valvular disease.		

TABLE VII—*continued.*

Initials, age, and sex.	Occupation.	Admitted.	Died.	History of attack.	Symptoms.	Post-mortem appearances.
J. H., 39, M.	Cook	Oct. 21	Oct. 23	Family history fairly good. Has had two attacks of "brain fever"—? delirium tremens—one 8 and the second 5 years ago. Had an epileptic fit for the first time about a month ago. On evening of admission fell down, struggled a good deal, gradually became unconscious, and was admitted at midnight.	Totally unconscious; breathing stertorous; limbs generally appeared paralysed. In the course of the night had convulsions. Oct. 22nd.—Much the same; right arm and leg paralysed and rigid. Motions passed in bed. Respirations rapid and stertorous; temp. 101·8°. Heart normal; urine albuminous. 23rd.—Breathing worse; pupils unequal; temp. 105·2°. Died at 6.30 a.m.	Brain : vessels at base atheromatous. Large hæmorrhage into left corpus striatum, pushing the fornix and septum lucidum over to right. It had not burst into ventricle, which contained bloody serum, but no clot. Heart hypertrophied. Kidneys : contracted granular.
E. C., 36, M.	?	Nov. 17	Nov. 24	Admitted to Ophthalmic Ward on August 11th with syphilitic iritis, secondary eruption, and history of chancre 3 months before. Says he had pain in head all the summer; no vomiting; no giddiness. Five weeks ago had a fit, and was insensible for 2 hours. Took to bed 5 days before admission in a semi-comatose condition. 3 days before admission drooping of right eyelid and loss of power in right arm were noticed.	Mind much affected; will not answer; tries to get out of bed. Right arm almost entirely powerless; left leg also much weaker than the other. Slight ptosis and facial paralysis on right side. Tongue protruded straight. Chest normal. Urine, sp. gr. 1030, much albumen. Temp. 97·6°. Nov. 21st.—Much more drowsy; slight internal strabismus of right eye; left pupil much smaller than right. 23rd.—Has been quite comatose for 2 days; some difficulty of swallowing; breathing stertorous; motions passed in bed. Temp. has been 101·6°. From this time breathing became worse, he had a number of short fits, and temp. rose to 107·5° a few hours before death.	Brain : no meningitis; a good deal of subarachnoid fluid. Left middle cerebral artery blocked, but not quite completely, by an old thrombus. No softening of convolutions of that side, but there was of corpus striatum. The right middle cerebral was blocked completely by clot, which was much more recent than in the left. Whole of frontal lobe softened, and corpus striatum as on left. The arteries were diseased, probably from syphilis. Other organs healthy.

TABLE VIII.—*Cases of Intestinal Obstruction treated in the Medical Wards.*

Initials, age, and sex.	Date of			Nature of obstruction.	Duration of symptoms.	Treatment.	Post-mortem appearances and remarks.
	Admission.	Discharge.	Death.				
C.W.H., 45, M.	April 9	—	April 11	Acute enteritis from constriction of bowel at neck of old her- nial sac.	Acute onset five days before ad- mission.	Abdominal section, with result of finding a piece of bowel which had been constricted in internal abdominal ring. Opera- tion on day after admis- sion.	No obstruction. Piece of small intestine which had been con- stricted was inflamed, but not gangrenous; no peritonitis.
W. B., 4 mos., M.	Jan. 8	—	Jan. 14	Intussusception.	Sudden onset the night before ad- mission.	Inflation tried twice un- der chloroform; fifteen hours and three days after onset of symptoms enemata.	Invagination of cæcum and small intestine into colon; no peri- tonitis.
G. G., 4½ yrs., M.	April 24	May 12	—	Intussusception.	Since 6 a.m. on the morning of admission.	Manipulation with finger in rectum, and subse- quent inflation with air ten hours after onset of symptoms.	The tumour could be felt in rectum as well as in abdomen, and sud- denly yielded to pressure of finger in rectum. A complete recovery.
K. P., 17, F.	Nov. 12	—	Dec. 27	Chronic peritonitis, causing incomplete obstruction of bowel.	Symptoms had ex- isted on and off since an attack of typhoid fever five years ago.	Enemata, morphia, injec- tions, &c.; bowel punc- tured by trocar.	Old peritonitis causing constrict- ion of bowel at various points, and subsequent distension. Death had resulted from perforation of bowel nine feet below pylorus, possibly due to puncture with trocar.
H. H., 49, F.	Aug. 30	—	Sept. 10	Chronic obstruction, probably due to malignant disease of bowel.	Three months; gra- dual onset.	Enemata. Left lumbar colotomy; date not stated.	No post-mortem.

TABLE VIII—*continued.*

Initials, age, and sex.	Date of			Nature of obstruction.	Duration of symptoms.	Treatment.	Post-mortem appearances and remarks.
	Admission.	Discharge.	Death.				
S. H., 50, F.	Oct. 12	—	Oct. 20	Stricture of rectum.	Three weeks.	Enemata, &c.	Malignant stricture of rectum; perforation of cæcum; acute peritonitis; no old ulceration at point of perforation.
M. B., 53, F.	May 14	—	June 17	Stricture of rectum.	Seventeen days.	Enemata given with much relief; died eventually from perforation of bowel.	Malignant stricture of rectum about 4 inches from anus; perforation of transverse colon, apparently determined by a sharp piece of mutton bone, which was retained in colon by the stricture, and had much excoriated the mucous membrane; acute peritonitis; no old ulceration at point of perforation.
M. A. H., 47, F.	Nov. 24	—	Nov. 24	Stricture of rectum.	Gradual onset since May.	None; patient was moribund on admission.	Stricture and ulceration of sigmoid flexure from new growth. Perforation of sigmoid flexure just below ulcer—? from use of enema-tube—acute peritonitis.
M. H., 59, F.	Feb. 10	—	Feb. 21	Stricture of rectum.	Six months; gradual onset.	Left lumbar colotomy commenced, but abandoned. Littre's operation performed at same time on right side, but bowel not opened till following day, three days after admission.	Stricture of rectum, consisting of ulcerated new growth, 4 inches above rectum; acute peritonitis originating in neighbourhood of wound.

T. M., 23, M.	April 28	Aug. 16	—	Stricture of rectum. Never had syphilis or dysentery.	Gradual onset for fourteen days.	Dilatation of stricture, which could be felt about three inches above anus, with bougies; enemata; patient finally passed the bougie himself from time to time.	Much relieved.
E. H., 45, M.	Aug. 13	—	Nov. 10	Stricture of ascend- ing colon.	Three months; gra- dual onset; sym- ptoms more severe for three weeks.	Left lumbar colotomy eight hours after admis- sion; no relief appa- rently at first, but on next day much faeces escaped from wound, and subsequently from anus. Water passed freely from anus when injected into wound.	Malignant ulcerated stricture, not tight, of ascending colon a short way above caecum; caecum con- tained many half-digested fish bones, and the bowel was per- forated just above stricture. Acute peritonitis. Patient was apparently doing well till the perforation occurred, and he died suddenly. The relief from the operation was of course only apparent.
E. D., 38, F.	Sept. 3	Oct. 30	—	Obstruction, appa- rently caused by growth in pelvis, involving rectum.	? Two years.	Enemata, opium, &c.	—
M.A.R., 58, F.	April 13	—	April 13	? Stricture. Patient had old umbilical hernia, which, how- ever, did not seem to be in any way strangulated.	? Two years.	None. Patient moribund on admission.	No post-mortem.



SPECIAL ANALYSES AND ABSTRACTS.

I.—MYXŒDEMA.

Two cases, both females.

CASE 1.—J. L—, æt. 38, admitted October 2nd. Discharged December 4th.

Family history.—Father died, æt. 46, from the effects of drink. Mother and a brother and sister died of consumption. Her one child died of water on the brain.

Previous history.—Had usual diseases of childhood, also typhus fever and rheumatic fever.

Present illness.—In 1869 first began to feel tottery on her legs with shooting pains in all the joints, especially in right arm, the hand pitting on pressure. This followed by pains in shins. Then became extremely nervous, and fell on attempting to walk. Lost her hair a good deal. Eyelids became puffy. Slowness of speech came on. Became deaf in right ear. Memory is good. Catamenia irregular.

State on admission.—Has recently had a bad flooding, and breath is now very short, and she is very weak. She is rather stout. Complexion waxy and translucent, with a flush on either cheek. Eyelids thick and drooping; eyebrows raised; eyeballs rather prominent; pupils equal. Skin dry and rough, elastic to touch; no pitting anywhere. Sight good; taste good; is a little deaf. Speech remarkably slow and deliberate. Hands spade-like. Thyroid gland cannot be felt. No lumps above clavicles. Feels listless and apathetic. Superficial and deep reflexes normal. Temp. 97·4°. Urine clear, sp. gr. 1015, ? trace of albumen.

During her stay in hospital patient regained some strength, but underwent no important change. The average amount of urine passed in the twenty-four hours was 45·7 oz., as estimated from twenty-five observations; its specific gravity, as estimated from eight observations, was 1014·5. The daily average of urea, as estimated from eleven observations, was 213·19 grs. It was noted to contain a trace of albumen on three occasions.

The temperature was taken seventy-one times, with few exceptions, morning and evening daily. It only reached normal sixteen times, and was never above 98·6°. On nineteen occasions it was below 97°.

CASE 2.—H. B—, æt. 36, admitted September 30th. Died October 6th.

This case was in hospital in 1879. For abstract of history and condition of patient at that time *vide* Table VIII on p. 388, vol. x.

No notes of history taken this time.

State on admission.—Typical features of a case of myxœdema. Signs of pneumonia at left back. First sound of heart inaudible, second clear and sharp. Pulse 72. No ascites. Tongue moist and pale. Bowels regular. Urine, sp. gr. 1020, no albumen. Catamenia absent for three months. Temp. 97·4°.

October 2nd.—Mind is wandering. Knows she is in St. Thomas's Hospital, but objects to having "no bed to lie on." Passed no urine yesterday nor during night. Bowels open twice. 23 oz. of urine drawn off, sp. gr. 1020, no albumen.

3rd.—Mind is clearer.

6th.—Has continued to wander, and is very drowsy. Evacuations passed in bed. Died quietly.

Temp., September 30th, 2 p.m., 97·4°; 8 p.m., 96·2°. October 1st, a.m., 94·8°; p.m. 95·6°. 2nd, a.m., 95·4°; p.m. 96°. 3rd, a.m., 95°. 4th, a.m., 94°; p.m., 94°. 5th, a.m., 94°; p.m., 94°. 6th, a.m., 94°.

Post-mortem.—Body well nourished. Skin very pale. Peritoneum contained a pint and a half of clear serum. Parts of the membrane were very oedematous. Pericardium was completely distended with pale serum. Left pleura adherent; right partially so, and contained half pint of serum. Heart 7½ oz.; valves normal. Lungs: left completely collapsed, and the whole organ sinks in water. Partial collapse of right. Liver anæmic. Kidneys sublobulated, elongated, and abnormally firm. Capsule strips off abnormally readily. On section organs presented a uniform homogeneous glistening aspect. No wasting of cortex. Spleen apparently normal. Intestines normal. Brain 45 oz., somewhat anæmic, but otherwise natural. Uterus large, but normal. Thyroid gland represented by two little yellowish-white masses, forming together a mass about the size of the last joint of the little finger.

II.—SCORBUTUS.

One case, J. W—, æt. 48, metal-worker, admitted April 27th. Died May 4th.

Family history.—Good. Mother had an attack of purpura, from which she recovered.

Previous history.—Good.

Present illness.—Since beginning of March says he has been living on bread and meat without vegetables. Four days before admission felt chilly and ill; on subsequent day left foot began to swell, then right knee, and arms and hips.

State on admission.—Fairly nourished. Breath foul, gums swollen, with a few small ulcers on them. Fauces swollen; slough on right side. Tongue red, and coated and swollen. Glands under jaw swollen and tender. Appetite fair; is very thirsty; bowels open. Heart and lungs normal. Urine 1030, no albumen. Temp. 100°. Has petechial spots over right elbow-joint; pain and tenderness in shoulder and elbow. Below knees on both legs, which are swollen, is an abundant petechial rash and some general bluish discoloration; no swellings in popliteal spaces; no articular swellings, but pain in joints. Ordered Mist. Pot. Citr. ʒj, 4tis horis.

April 30th.—Not so well. Temp. has risen to 103°. More bruise-like discoloration, with swelling on dorsum of each foot and over right olecranon. Throat very painful.

May 2nd.—Patch of extravasation over sacrum, one on cheek, and more on legs and arms. Left forefinger red and swollen. Ordered Liq. Ferri Perchlor. $\text{m}\times\text{v}$, Spirit. Chlorof. $\text{m}\times\text{v}$, Aq. ad zj , t. d. s., wine $\text{z}\times$.

3rd.—Extravasation of blood beneath prepuce. A few spots of blood in motion.

4th.—Very much worse. Very livid, and extravasations have increased. Pulse 126; temp. 100·8°. In the afternoon he became delirious and died, some blood being passed in the urine just before death.

Post-mortem.—Abundant subcutaneous hæmorrhages as in life. Peritoneum contained a few ounces of bloody serum; considerable patches of extravasation between layers of mesentery. Pleuræ and pericardium normal; no extravasation beneath them. Lungs œdematous. Heart: left ventricle firmly contracted and empty, right contained some recent clot. Liver appears swollen; here and there in substance some patches of extravasation. Spleen: a patch of extravasation beneath capsule. Kidneys normal. Intestines: some petechial hæmorrhage in patches beneath mucous membrane of small intestine; Peyer's patches in lower part were swollen, and the lowest was ulcerated; in the cæcum was a patch, where there was a considerable amount of clot beneath mucous membrane, which itself appeared black and gangrenous and about to slough; a few inches lower down was a patch, about two inches long, involving the whole circumference of the bowel, where there was the same condition, and a large clot beneath peritoneum corresponding to it. Stomach: a few small submucous extravasations. The tonsils and mucous membrane around gangrenous. Larynx: extravasations here and there beneath its mucous membrane. Joints normal. There were no clots between the muscles of legs, the extravasation being almost entirely into subcutaneous tissue.

III.—ANÆMIA.

Fifteen cases: 3 males, 12 females. 1 case pernicious and fatal; in 1 probably renal disease; in 1 possibly Addison's disease.

Abstract of fatal case.—E. T—, æt. 50, female, married, admitted November 16th, 1880. Died February 3rd, 1881.

Family history.—Father died at 73. Mother died at climacteric period. Has had five sisters; only one is living. One died of post-partum hæmorrhage and three at climacteric period. Has had five children and four miscarriages. No certain evidence of syphilis.

Previous history.—Never very healthy. Usual diseases of childhood. Rheumatic fever twelve years ago. Chest was affected then, and has suffered from palpitation on exertion since. Catamenia were formerly too frequent, but they have not appeared for four years. Confinements were troublesome, and had hæmorrhage after two.

Present illness.—Has been coming on gradually for four or five months, and

for the last ten weeks she has taken to her bed. Commenced with weakness and vague pains in limbs, which have been increasing. At same time throat and gums have been sore, and she has been spitting blood during her whole illness. Has not herself noticed any increased sallowness of her complexion.

State on admission.—Well nourished; intensely anæmic; conjunctivæ slightly yellow; mucous membrane of mouth pale; gums much swollen; teeth tender. Spits blood from time to time. Lungs emphysematous. Heart: murmur all over præcordium, systolic and loudest at base. No evidence of hypertrophy. Pulse 84, weak, and compressible. Venous hum heard on both sides of neck. Abdomen flaccid. Liver can be felt below ribs. Spleen enlarged and palpable below ribs. No glandular enlargement anywhere. Temp. 99·4°. Urine 1020, lithates, no albumen. Ordered wine and a mixture containing iron.

During her stay in hospital she became gradually weaker; had delusions from time to time; was constantly troubled with a hacking cough, and expectorated blood, most probably from gums. The circulation became weaker, and the blood on examination was found to be somewhat deficient in the number of the red corpuscles, which were paler than usual, did not run into rouleaux, but remained heaped in irregular masses. They were very pale in colour, very few were well formed, many tailed. Her appetite failed, and towards the last she suffered from vomiting. Her temperature was almost always at some time during the day above the normal till the last two days, when it was subnormal. The urine was examined on seven occasions, and was never found to contain albumen.

Post-mortem.—Body fairly nourished; no œdema; a thick layer of bright yellow subcutaneous fat. Mesentery loaded with fat of a bright yellow colour, and between layers of omentum there was a thick uniform layer. No ascites, or fluid in pericardium or pleuræ. Walls of heart loaded with fat; organ somewhat hypertrophied; valves normal; substance, especially that of left ventricle, remarkably fatty; cavities contained no clot, but only watery claret-coloured blood. Elsewhere in vessels the same kind of blood, and a few small shreds of clot. Lungs œdematous. Liver flabby and wasted. Spleen rather large and soft. Kidneys showed early interstitial change, with a few cysts and granules of urate of soda. Brain substance very pale, and convolutions shrunken and wasted. Uterus normal.

IV.—GENERAL TUBERCULOSIS.

Nine cases fatal: 4 males and 5 females.

CASE 1.—Male, æt. 12. Had symptoms of progressive wasting, without much fever.

Post-mortem.—Mediastinal and mesenteric glands caseous; tubercle between layers of pericardium, which were adherent; tubercle in lungs, and also caseous pneumonia. There was also an ulcer in stomach, which had perforated. No tubercle in intestines, liver, spleen, kidneys, or brain.

CASE 2.—Male, æt. 2. Died on day of admission with symptoms of meningitis and hyperpyrexia. Temp. just before death 110°.

Post-mortem.—Tubercular meningitis and miliary tubercles of lungs and pleuræ.

CASE 3.—Male, æt. 4. Admitted for empyema, which was tapped, and suppuration in elbow-joint, which was opened. Appeared to improve for a time, but then got worse, and eventually died with symptoms of meningitis.

Post-mortem.—Tubercular meningitis, and miliary tubercles of lungs, liver, and spleen; also some pus in left pleura.

CASE 4.—Male, æt. 2. Symptoms of meningitis. Very chronic case. One month in hospital.

Post-mortem.—Tubercular masses in brain; meningitis; miliary tubercles of lungs.

CASE 5.—Female, æt. 23. Very well nourished. Admitted with symptoms of acute fever. The temperature was very high throughout, and reached 107° before death.

Post-mortem.—Miliary tubercles of pleuræ, lungs, peritoneum, and kidneys. No tubercle of brain, but numerous small, probably perivascular, hæmorrhages.

CASE 6.—Female, æt. 9. Symptoms of meningitis.

Post-mortem.—Miliary tubercle in pia mater of brain and cord, peritoneum pleuræ, and lungs.

CASE 7.—Female, æt. 29. Symptoms of meningitis.

Post-mortem.—Tubercle of pia mater of brain and cord, peritoneum, pleuræ, and lungs.

CASE 8.—Female, æt. 17 months. Symptoms of progressive emaciation.

Post-mortem.—Tubercle of lungs, bronchial glands, thymus, liver, and spleen.

CASE 9.—Female, æt. 34. Rapid wasting, with fever. Signs of pleurisy and peritonitis. No post-mortem.

V.—MALIGNANT DISEASE (GENERAL).

Fifteen cases: 6 males and 9 females. 5 males and 4 females died.

CASE 1.—Male, æt. 42. Died. Right testicle had been enlarged for eight years. Had been ill for four or five months with cough and dyspnœa. Signs of tumour of chest.

Post-mortem.—Sarcoma of right testicle, of lumbar and mediastinal glands, extending backwards through intervertebral foramina into spinal canal, but without injuring the cord; also sarcoma of lungs.

CASE 2.—Male, æt. 23. Died. Right testicle removed five months before for cystic sarcoma. Ill for a month with dyspnœa. Fluid in pleuræ. Large quantities of blood-stained serum removed on two occasions by aspirator.

Post-mortem.—Sarcoma of liver, spleen, kidneys, left supra-renal, lungs, pleuræ, and mediastinal glands; also a mass in posterior part of right frontal lobe of brain.

CASE 3.—Female, æt. 54. Died. Scirrhus of right mamma. Signs of intra-thoracic tumour and enlarged liver.

Post-mortem.—Scirrhus of right mamma, lungs, and liver.

CASE 4.—Female, æt. 56. Died. Scirrhus tumour in left mamma. Suffered from ascites and chest mischief.

Post-mortem.—Scirrhus of left mamma, pleuræ, liver, and retro-peritoneal glands.

CASE 5.—Female, æt. 46. Discharged. Left mamma excised nine months ago. Symptoms of intra-thoracic growth.

CASE 6.—Female, æt. 48. Discharged. Left mamma removed three years ago. Symptoms of intra-thoracic tumour.

CASE 7.—Female, æt. 28. Discharged. Scirrhus tumours in both mammae, skin, orbit, abdomen, and thorax. A very chronic case. Symptoms those of progressive weakness and emaciation.

CASE 8.—Female, æt. 64. Discharged. Melanotic sarcomata in skin, most abundant on abdomen. Had ascites, probably due to growth in abdomen.

CASE 9.—Female, æt. 30. Died. Symptoms those of intra-thoracic tumour, &c.

Post-mortem.—Sarcomata of periosteum of left clavicle and scalp, of retro-peritoneal and mediastinal glands, and of liver.

CASE 10.—Male, æt. 24. Discharged. Numerous subcutaneous tumours, one of which was excised, and found to have the structure of a sarcoma. Skin of left leg much thickened, as in elephantiasis, probably from lymphatic obstruction. A very chronic case.

CASE 11.—Male, æt. 10. Died. Right leg removed for sarcoma one year before. Symptoms of intra-thoracic tumour.

Post-mortem.—Right pleura entirely occupied by soft, partly cystic, new growth; left also, to some extent, invaded. Abdominal organs free from disease.

CASE 12.—Female, æt. 28. Died. Symptoms those of new growth in peritoneum.

Post-mortem.—Malignant disease of right ovary, liver, retro-peritoneal glands, and lungs. Microscopically examined, the growth proved to be epithelioma; in what organ it originated there was nothing to show.

CASE 13.—Male, æt. 48. Died. Symptoms of emaciation and great constricting pain in abdomen. Paraplegia set in suddenly in hospital.

Post-mortem.—Malignant disease of right lung, liver, pancreas, and glands of celiac axis, involving intercostal nerves and invading spinal canal, as in the first case, but also producing softening of the spinal cord from pressure.

CASE 14.—Male, æt. 38. Died. Symptoms of emaciation, great pain in back and epigastrium, and radiating round chest.

Post-mortem.—Malignant disease of peritoneum, omentum, liver, pancreas, and retro-peritoneal glands surrounding and implicating intercostal and lumbar nerves, but not invading spinal canal.

The last case was a readmission.

VI.—ERYTHEMA.

Seven cases: 1 male and 6 females. Youngest 10, oldest 35. One was a case of erythema papulatum; the rest were cases of erythema nodosum. In all the

cases there was more or less fever, the highest temperature noted being 104·6°. In the case of erythema papulatum the eruption was in the arms and legs. In two cases of erythema nodosum the eruption was only on the legs below the knees; in two it was on the thighs and buttocks as well; in four the arms were also affected; and in one case a spot or two appeared on the face. In one case there had been tonsillitis just before admission, and in two there was a family or personal history of acute rheumatism.

VII.—BRONCHIECTASIS.

Three cases: 2 males, 1 female. In one male there was uniform dilatation and thickening of bronchi in both lungs; in the other the dilatation was uniform, but confined to the base of the left lung.

CASE 3.—Female, æt. 32. History of winter cough for years. Rheumatic fever six years ago. Has been much worse for the last fortnight, having had shivering, vomiting, and cough.

On admission fairly nourished, cyanotic, with slight clubbing of finger ends; legs œdematous; cough, with muco-purulent expectoration. Left side contracted, and heart appears pulled over to same side. Right side hyper-resonant, with copious moist râles. Left side somewhat less resonant than right, but nowhere actually dull except over a patch in mammary region, where there is tubular breathing and bronchophony. Elsewhere on left side rhonchal fremitus, marked with loud, cooing, inspiratory rhonchi. Temperature 99·4°. Urine: sp. gr. 1023, acid, much albumen. Till time of death, about five weeks after admission, cough remained bad, with copious muco-purulent expectoration. Œdema of legs remained, and a purpuric rash appeared on them. She had sickness and diarrhoea at times. The average quantity of urine passed in the twenty-four hours was 22 ounces.

Post-mortem.—Slight deposit of lymph on pericardium. Left pleura adherent throughout, but not materially thickened. A few adhesions at right apex. Heart normal, displaced towards left; weight 8 ounces. Anterior border of right lung very emphysematous, and projected one and a half inches beyond median line; bronchi not dilated, simply congested. Left lung much contracted; a patch of grey hepatisation in lower part of upper lobe. Scattered fairly uniformly throughout whole organ were numerous cavities, from a quarter to three quarters of an inch in diameter, which proved to be dilatations of bronchial tubes. They were lined with thin shining mucous membrane. The lung tissue between the cavities was somewhat congested, but crepitant, and free from fibroid change. No tubercle anywhere. Intestines and larynx not ulcerated. Liver and spleen congested. Kidneys and intestines typically amyloid.

VIII.—ELEPHANTIASIS.

One case, female, æt. 36, relieved.

Family history.—Good.

Previous history.—Not remarkable. When fifteen had ague in Kent. Has got much stouter in the last three or four years.

Present illness.—Seventeen months ago was attacked with vomiting, rigors, and fever, followed by swelling of right great toe, attended by great pain. Whole foot and ankle also became affected, then also right hand, wrist, and forearm. The attack lasted four days, and was followed by desquamation. Another attack, in which the same parts were affected, occurred six weeks later. The swelling did not disappear, but somewhat subsided between the attacks. Since then she has had eight similar attacks, and though the erysipelas attacked no other parts, the enlargement has affected the left leg especially, and the left arm in a less degree.

State on admission and progress.—Stout, florid, and healthy looking. Both legs enormously enlarged. Right measures twenty-three inches in circumference four inches above ankle, left sixteen inches. Skin does not pit; is brawny, coarse, with an ichthyotic, and in some parts a tuberculated, character. There is a tight constriction at ankle, giving somewhat the appearance of Turkish trowsers. Similar condition of arms, right being larger than left. Sensation impaired over affected parts. Urine and temperature normal. Faint systolic murmur at apex of heart. Weighs seventeen stone. Had one well-pronounced attack of erysipelas shortly after admission, which lasted for three days. With this exception during a two months' stay she enjoyed good health. The blood and urine were repeatedly examined for filariæ, but none were found. She was treated with Martin's bandages with the effect of somewhat reducing the swelling.

IX.—ACUTE YELLOW ATROPHY OF LIVER.

Two cases: 1 male, 1 female.

CASE 1.—Male, æt. $2\frac{1}{2}$, admitted April 5th. Died April 6th. Jaundice has been coming on gradually for three weeks; has become duller during last week; has been restless and fretful. For last week has often been sick. For two or three days has had nervous twitchings. Motions clay coloured, offensive.

State on admission and progress.—Well nourished; is deeply jaundiced; frequent convulsions; vomits frequently. The vomit has the character of coffee grounds. Abdomen rather distended. Liver not felt below ribs. Dulness measures only one and a quarter inches in nipple line. Pulse 112; resp. 52, shallow, and hurried; temp. 98.2° in rectum. In the evening there was hic-cough and the vomiting, and convulsions continued. Water was drawn off by catheter, but no record was kept of its characters. Died early the succeeding morning.

Post-mortem.—Body and tissues deeply bile stained; a few punctiform hæmorrhages beneath serous membranes. Liver weighed $10\frac{1}{2}$ oz., shrunken, and flabby. On section much mottled, in some parts orange, in some pale straw coloured, and in others green. On microscopical examination showed the characters of acute yellow atrophy.

CASE 2.—Female, æt. 36, admitted May 18th. Died May 25th.

Family and previous history.—Nothing remarkable in either.

Present illness.—Began three weeks before admission with headache and

vomiting, accompanied by jaundice. Has been gradually getting weaker, and has now for a day or two been unconscious. Has been married three months, and is said to be pregnant. Had children before her marriage.

State on admission.—Rather thin; deeply jaundiced; is very restless; keeps writhing about and moaning; answers unintelligibly when spoken to. Respirations constantly interrupted by sighing and groaning. Heart normal. Pulse 104. Tongue dry and brown; sordes on lips and teeth. Abdomen not distended. Liver dulness measures three and a quarter inches in nipple line. Temp. 97.4° . Urine, sp. gr. 1012, albuminous, contains bile pigment.

April 20th.—Has remained unconscious and very restless; skin of a more dusky colour. No vomiting since admission; bowels have not been open. Temp. 98.2° . Urine, sp. gr. 1012, bile pigment, no albumen.

21st.—Better; talks sensibly; jaundice less marked; passes urine voluntarily; no action of bowels. Temp., p.m., 100° .

24th.—Has been getting worse; more delirious; weaker; jaundice more intense. Liver dulness measures only two and a half inches. Temperature has been as high as 102° . Bowels open; motion pale brown.

25th.—Gradually sank and died. Temp. 106.2° just before death. No note made of leucin and tyrosin in the urine. There were no hæmorrhages noted.

Post-mortem.—No hæmorrhages anywhere; tissues much bile stained. Lungs congested in dependent parts. Liver weighed 2 lb. $2\frac{1}{2}$ oz.; much wasted; very thin and flabby; surface smooth. On section, of a pale greenish-yellow colour, with paler streaks between lobules. Spleen small. Kidneys flabby. Cortex swollen and bile stained; medullary rays of a rather bright red colour. Brain congested. Uterus showed no evidence of pregnancy or recent abortion.

SURGICAL REPORT.

1880.

BY HENRY PERCY POTTER, F.R.C.S.

General Statement.

Number of surgical beds	241
„ of patients in hospital January 1st, 1880	208 { Males 112 Females 96
„ „ admitted during the year 1880	2299 { Males 1350 Females 949
Total	2507
„ „ in hospital December 31st, 1880	234 { Males 129 Females 105
„ „ treated to a termination during the year 1880	2273
Discharged cured	Total. 1747 Males. 1039 Females. 708
„ relieved	332 198 134
„ unrelieved	52 22 30
Died	142 94 48
	2273 1353 920

Average number of deaths 6·2 per cent.
„ „ days in hospital 32.

Average number of surgical deaths since the opening of the New Hospital in 1871.¹

1871-72	7·7 per cent.	1876-77	7·5 per cent.
1872-73	8·5 „	1877-78	7 7 „
1873-74	9·1 „	1878-79	6·0 „
1874-75	8·7 „	1879-80	6·2 „
1875-76	6·6 „		

The above list includes many cases brought into the hospital dead or dying.

TABLE I.—*Abstract, showing Diseases, Injuries, &c., in*

DISEASE.	Sex.		Age.								Duration before admission						
	M.	F.	Under 15	15-20	20-30	30-40	40-50	50-60	Above 60		Dys. 1-4	Dys. 5-13	Wks 2-4	Mts. 1-2	Mts. 2-6	Mts. 6-12	Chronic
GENERAL DISEASES.																	
Erysipelas (arising) .	24	14	3	3	5	5	13	5	2	2	...	...	...	...	...	...	...
„ (admitted as such) .	39	18	5	4	7	17	11	9	3	1	47	6	4	...	..	...	...
Pyæmia (arising) .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
„ (admitted as such) .	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...
<i>Syphilis</i> —																	
1. Primary, by—																	
<i>a.</i> Indurated sore .	2	18	...	...	13	4	2	1	...	...	1	4	6	6	3	...	...
2. Secondary, by—																	
<i>a.</i> Condylomata .	2	36	...	...	28	8	...	2	...	...	4	8	8	8	5	1	...
<i>b.</i> Eruptions .	4	38	...	...	25	14	1	2	...	...	4	7	9	13	4	3	...
<i>c.</i> Ulceration of tongue	...	1	...	...	1	...	...	...	...	...	...	...	...	1	...	...	...
<i>d.</i> „ throat	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...
<i>e.</i> „ cornea	...	1	...	...	...	1	...	...	...	...	...	...	1	...	...	...	...
LOCAL DISEASES.																	
TUMOURS.																	
<i>Carcinomata</i> —																	
Scirrhus of—																	
<i>a.</i> Breast .	...	22	...	...	...	...	2	12	3	5	...	...	...	...	5	7	...
<i>b.</i> „ (recurrent)	...	2	...	...	...	...	1	...	...	1	...	...	...	...	1	...	...
<i>c.</i> Glands .	...	5	...	...	...	...	...	3	2	...	...	...	1	...	1	1	...
<i>d.</i> Rectum .	4	2	...	...	1	...	2	1	1	1	...	...	...	...	3	1	...
Encephaloid of—																	
Bladder .	1	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...
Colloid of—																	
Rectum .	...	1	...	...	...	...	...	...	...	1	...	...	...	...	1	...	...
Epithelioma of—																	
<i>a.</i> Tongue .	12	1	...	...	...	...	1	7	4	1	...	...	...	3	5	2	...
<i>b.</i> Lip .	7	...	...	...	...	...	1	...	3	3	...	...	...	1	4	...	...
<i>c.</i> Mouth .	2	...	...	...	...	...	...	2	...	...	...	...	...	...	2	...	...
<i>d.</i> Vulva and penis	1	3	...	...	...	...	...	2	2	...	...	...	...	...	1	1	...
<i>e.</i> Scrotum .	1	...	...	...	...	...	...	...	...	1	...	...	1	...	...	...	...
<i>f.</i> Anus and rectum	3	1	...	...	...	...	1	2	1	...	...	...	...	...	2	...	...
<i>g.</i> Lower extremity	2	...	...	...	...	...	...	1	1	...	...	...	...	...	...	1	...
<i>h.</i> Inguinal glands .	2	...	...	...	...	...	...	...	1	1	...	...	1	...	...	1	...
<i>j.</i> Submaxillary glands	3	...	...	...	...	...	...	2	...	1	...	...	...	...	3	...	...
<i>Sarcomata</i> —																	
1. Spindle-celled.																	
<i>a.</i> Upper jaw .	2	3	...	...	...	1	1	...	3	...	...	...	...	...	2	1	...
<i>b.</i> Lower jaw .	...	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...
<i>c.</i> Mamma .	...	1	...	...	...	1	...	...	...	...	...	...	...	1	...	...	...
<i>d.</i> Scapula .	1	1	...	...	...	...	...	...	...	2	...	...	1	...	...	...	...
<i>e.</i> Thigh .	3	1	1	...	1	2	...	...	...	...	...	...	1	...	1	1	...

Classes, according to authorised Nomenclature.

Duration of residence.								Result.				Remarks.
Dys. 5-13	Wks 2-4	Mts. 1-2	Mts. 2-4	Mts. 4-6	Mts. 6-9	Mts. 9-12	Above a year.	C.	R.	U.	D.	
13	6	9	4	1	2	1	1	32	5	...	1	See Special Table III.
19	19	9	3	1	...	...	...	49	2	...	6	4 died of visceral disease, 1 from post-pharyngeal abscess, 1 from exhaustion and disease of elbow.
...	
...	...	...	...	...	...	...	...	...	...	...	1	
1	5	9	5	...	...	...	...	18	1	1	...	With warts 2, psoriasis 5, gonorrhœa 5, sore-throat 2, bubo 1.
7	9	13	6	...	...	...	...	32	5	1	...	4 combined with other secondary symptoms.
11	5	15	10	1	...	...	...	34	8	...	...	Chiefly psoriasis and roseola.
...	...	1	...	...	...	...	...	1	...	...	...	With rupial eruption.
...	1	...	...	...	...	...	...	1	...	...	...
...	1	...	...	...	...	...	...	1	...	...	...	With iritis.
5	6	11	...	...	...	...	...	15	1	4	2	2 died suddenly: 1 with cardiac disease, 1 from ? acute septicæmia.
...	...	1	...	...	...	...	...	1	...	1	...	Primary amputation 8 and 13 months previously.
...	5	...	...	...	...	...	...	3	...	1	1	Death from general infection of carcinoma.
...	4	...	1	...	...	...	...	...	1	2	3	2 ? scirrhus, 2 colotomy.
...	...	1	...	...	...	...	...	...	...	...	1	
...	...	...	1	...	...	...	...	...	...	...	1	With large ischio-rectal abscess.
3	3	5	...	1	...	...	...	8	1	1	3	2 recurrent, 3 Langenbeck's operation, death.
4	2	...	1	...	...	...	...	4	1	2	...	2 recurrent, in 5 operation.
...	1	...	...	...	...	...	...	...	...	1	1	Neither operated upon.
2	...	1	...	...	...	...	...	2	1	1	...	1 involving os, 3 removed.
...	...	1	...	...	...	...	...	1	...	...	...	Recurrent.
1	1	1	...	...	...	...	...	1	1	1	1	1 died suddenly whilst under ether.
...	...	...	1	...	...	1	...	1	...	...	1	1 following scar of burn, 1 connected with ulcers.
1	1	...	...	...	...	...	...	...	2	...	...	Too extensive for operation.
...	1	...	1	...	...	...	...	...	2	1	...	Following removal of tongue.
2	2	1	...	...	...	...	...	2	1	2	...	1 extending deeply into zygomatic fossa, 1 operation.
...	1	...	...	...	...	...	...	1	...	...	...	Osteo-sarcoma.
...	...	...	...	...	1	...	...	1	...	...	...
...	...	2	...	...	...	...	...	2	...	...	...	Recurrent.
...	1	2	1	...	...	...	...	2	...	2	...	Amputation of thigh in 2.

TABLE I.—Abstract, showing Diseases, Injuries, &c., in

DISEASE.	Sex.		Age.								Duration before admission.							
	M.	F.	Under 5	5-10	-20	-30	-40	-50	-60	Above 60	Dys. 1-4	Dys. 5-13	Wks 2-4	Mts. 1-2	Mts. 2-6	Mts. 6-12	Chronic	Not re.
LOCAL DISEASES—continued.																		
TUMOURS.																		
Sarcomata—																		
1. Spindle-celled — continued.																		
<i>f.</i> Fibula . . .	1	...	...	1	...	...	...	...	...	...	...	...	...	1	...	...	...	...
<i>g.</i> Multiple . . .	1	1	...	...	...	...	1	1	...	...	...	...	...	...	1	...	1	...
2. Round-celled.																		
<i>a.</i> Upper jaw . . .	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1	...	...
<i>b.</i> Mamma . . .	...	2	1	...	...	...	...	1	...	...	...	...	...	1	1	...	...	...
<i>c.</i> Parotid . . .	...	2	...	...	...	...	...	1	1	...	...	...	...	...	...	...	2	...
<i>d.</i> Groin (melanotic)	...	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1	...
<i>e.</i> Face . . .	2	2	...	...	...	1	...	...	2	1	...	...	...	1	1	...	2	...
<i>f.</i> Leg . . .	...	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...	1	...
<i>g.</i> Testis . . .	1	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1	...
3. Myeloid.																		
Lower jaw . . .	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1	...
Sarco-myxoma . . .	1	2	...	...	...	1	1	1	...	...	...	...	...	...	...	...	3	...
Myxoma . . .	1	1	...	...	...	...	1	1	...	...	...	...	...	...	...	...	2	...
Adenoma—																		
Mamma . . .	...	9	...	...	5	1	2	1	...	...	...	...	...	2	2	1	4	...
Enchondroma . . .	...	3	...	...	...	1	...	...	1	1	...	...	...	...	...	...	3	...
Fibroma . . .	...	8	1	...	1	2	1	2	1	...	...	...	...	1	2	1	4	...
Lipoma . . .	2	6	1	1	1	...	...	3	1	1	...	...	...	...	...	1	7	...
Lymphoma . . .	...	4	...	...	...	4	...	...	...	...	...	...	...	1	...	1	2	...
Neuroma . . .	1	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...	...	...
Angioma . . .	1	7	...	2	3	1	...	...	1	1	...	...	...	...	1	...	5	...
Nævus vascularis . . .	...	4	2	1	1	...	...	...	...	...	...	...	...	...	...	...	4	...
Rodent ulcer . . .	1	3	...	...	...	...	...	2	2	...	...	...	...	1	...	...	3	...
Lupus . . .	1	3	...	...	...	2	2	...	...	...	...	...	...	...	...	...	4	...
Polypus . . .	1	1	...	1	...	...	1	...	...	...	...	...	...	1	1	...	...	...
Exostosis . . .	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...
Gumma . . .	6	1	...	...	1	1	3	2	...	...	...	...	1	1	...	2	2	...
Papilloma . . .	...	2	...	...	...	...	...	...	...	2	...	...	...	...	...	1	1	...
Molluscum . . .	1	1	...	1	...	...	...	1	...	...	...	...	...	...	...	...	2	...
Doubtful . . .	...	2	...	...	...	...	1	1	...	...	...	...	...	...	...	...	2	...
Cystic—																		
<i>a.</i> Ovarian . . .	...	23	...	...	2	4	6	4	5	2	...	...	...	...	4	2	16	...
<i>b.</i> Sebaceous . . .	2	2	...	...	...	...	2	1	1	...	...	...	...	...	...	...	4	...
<i>c.</i> Simple . . .	1	2	...	...	1	...	...	1	1	...	...	...	...	...	...	...	3	...
<i>d.</i> Hydatid . . .	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...
NERVOUS SYSTEM.																		
Tetanus (arising) . . .	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...
„ (admitted as such)	4	...	...	...	2	...	2	...	...	...	2	2	...	...	...	...	...	...

Classes, according to authorised Nomenclature—continued.

Duration of residence.								Result.				Remarks.
Dys. 5-18	Wks 2-4	Mts. 1-2	Mts. 2-4	Mts. 4-6	Mts. 6-9	Mts. 9-12	Above a year.	C.	R.	U.	D.	
...	...	...	1	...	...	...	...	1	...	...	...	Removal, hæmorrhage, amputation of thigh.
...	1	1	...	...	...	...	...	...	...	...	2	1 in axillæ, neck, thigh, chest, and back, liver, &c.; 1 in brain, chest, neck, and abdomen.
...	1	...	...	...	...	...	...	...	...	1	...	Too extensive for operation.
1	1	...	...	...	...	...	...	1	...	1	...	
...	1	1	...	...	...	...	...	2	...	...	...	Both removed.
...	...	1	...	...	...	...	...	1	...	...	...	Primary.
...	1	2	...	...	...	...	...	1	...	2	1	1 of lower eyelid, 3 of cheek or upper jaw.
...	...	1	...	...	...	...	...	1	...	...	...	Removed.
...	...	1	...	...	...	...	...	1	...	...	...	Cystic, castration.
...	...	...	...	...	1	...	...	...	1	...	...	Thrice recurrent, removal of lower jaw.
...	2	1	...	...	...	...	...	3	...	...	...	Of mamma, parotid, and finger.
...	...	1	1	...	...	...	...	2	...	...	...	Of neck and thigh.
1	5	2	...	...	...	...	...	8	1	...	...	8 removed.
...	3	...	...	...	...	...	...	3	...	...	...	3 parotid (cystic).
3	...	5	...	...	...	...	...	3	1	3	1	2 epulis of upper jaw, 1 of knee, 5 uterine.
1	3	4	...	...	...	...	...	8	...	...	...	Of axilla, back, loin, arm, thigh, and neck.
...	4	...	...	...	...	...	...	3	1	...	...	Of axilla, groin, and neck.
...	...	1	...	...	...	...	...	...	1	...	...	Following wound of finger.
...	2	4	2	...	...	...	...	7	1	...	...	All removed.
1	3	...	...	...	...	...	...	3	1	...	...	3 of head, 1 of back.
...	2	2	...	...	...	...	...	3	1	...	...	Of head and face.
...	1	3	...	...	...	...	...	1	3	...	...	1 treated with thermo-cautère.
...	...	2	...	...	...	...	...	2	...	...	...	Rectum.
...	...	1	...	...	...	...	...	1	...	...	...	Of tibia.
...	3	2	1	...	...	...	...	5	2	...	...	Of tongue, face, neck, shoulder, calf.
1	...	1	...	...	...	...	...	2	...	...	...	Of vulva and clitoris.
2	...	...	...	...	...	...	...	1	1	...	...	1 general, 1 of ear.
1	1	...	...	...	...	...	...	1	1	...	...
3	3	15	2	...	...	...	...	11	4	4	4	15 antiseptic ovariectomy.
1	3	...	...	...	...	...	...	4	...	...	...	Of neck and scalp; 1 dermoid on orbit.
...	2	1	...	...	...	...	...	3	...	...	...	Of thigh and forehead, both removed; 1 of sper- matic cord, tapped.
...	...	...	1	...	...	...	...	1	...	...	...	Removed antiseptically from thigh.
...	1	...	...	...	...	...	...	...	...	...	1	} See Tetanus (Summary of Diseases), p. (316) ?.
...	...	1	...	...	...	...	...	2	...	...	2	

TABLE I.—*Abstract, showing Diseases, Injuries, &c., in*

DISEASE.	Sex.		Age.									Duration before admission.						
	M.	F.	Under 5	5-10	-20	-30	-40	-50	-60	Above 60	Dys. 1-4	Dys. 5-13	Wks 2-4	Mts. 1-2	Mts. 2-6	Mts. 6-12	Chronic	
CIRCULATORY SYSTEM.																		
Aneurism	3	...	...	...	...	...	3	...	...	...	...	...	...	...	2	...	1
Varicose veins	1	2	...	...	...	...	2	...	...	1	...	...	...	...	...	...	3
Phlebitis	2	3	...	...	...	2	...	1	2	...	2	3	...	...	...	...	...
Hæmorrhage	7	3	2	...	...	4	3	1	...	...	10	...	...	...	...	...	...
Epistaxis	8	...	...	...	1	1	3	2	1	...	7	1	...	...	...	...	...
GLANDULAR SYSTEM.																		
Adenitis (acute)	7	5	1	...	5	3	2	1	...	...	1	3	5	...	...	...	...
„ (chronic)	1	4	...	...	2	2	1	...	...	...	...	...	...	...	...	...	5
Angioloecitis	1	1	...	...	...	1	...	1	...	...	1	...	1	...	...	...	...
Mammary abscess . . . . .	...	7	...	...	2	4	1	...	...	...	...	...	2	5	...	...	...
Enlarged tonsils . . . . .	...	2	...	...	1	1	...	...	...	...	...	...	1	...	...	...	...
Enlarged thyroid	1	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1
RESPIRATORY SYSTEM.																		
Aphonia . . . . .	...	1	...	...	1	...	...	...	...	...	...	...	...	...	1	...	...
Diphtheria . . . . .	...	1	...	1	...	...	...	...	...	...	1	...	...	...	...	...	...
Empyæma . . . . .	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	1	...
Dyspnœa	1	...	...	...	...	...	1	...	...	...	...	...	...	1	...	...	...
DIGESTIVE SYSTEM.																		
Intestine—																		
Strangulated hernia—																		
a. Inguinal	22	1	1	...	2	3	...	5	4	8	21	2	...	...	...	...	...
b. Femoral	4	15	...	...	...	1	4	6	5	3	16	3	...	...	...	...	...
c. Umbilical	2	5	...	...	...	1	...	...	2	4	6	1	...	...	...	...	...
Herniæ—																		
a. Inguinal	11	...	2	...	...	2	1	3	1	2	2	2	...	...	...	...	3
b. Femoral . . . . .	...	5	...	...	...	1	1	1	1	1	2	1	...	...	...	...	2
c. Umbilical . . . . .	...	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1
d. Ventral	1	...	...	...	...	...	...	1	...	...	...	1	...	...	...	...	...
Fistula in ano	18	2	...	...	...	6	4	8	2	...	...	...	2	7	4	2	5
„ hypogastric . . . . .	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...
Hæmorrhoids	9	2	...	...	1	1	3	4	2	...	...	...	...	1	1	2	7
Prolapsus ani	2	2	1	...	...	...	...	1	...	2	...	...	1	1	...	...	2
Stricture of rectum . . . . .	...	2	...	...	...	2	...	...	...	...	...	...	...	...	...	...	2
Ulcer and fissure of rectum	1	7	...	...	4	1	2	1	...	...	...	...	2	4	...	...	1
Ulcer of tongue and mouth	3	...	...	...	...	1	1	1	...	...	...	...	...	1	1	1	...
Intussusception	2	...	2	...	...	...	...	...	...	...	1	...	...	...	...	...	...
Obstruction of intestine	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	1

Classes, according to authorised Nomenclature—continued.

Duration of residence.								Result.				Remarks.
Dys. 5-13	Wks 2-4	Mts 1-2	Mts 2-4	Mts. 4-6	Mts. 6-9	Mts. 9-12	Above a year.	C.	R.	U.	D.	
...	1	1	1	...	...	...	...	2	1	...	...	2 popliteal, ligature of femoral; 1 innominate.
1	1	1	...	...	...	...	...	1	2	...	...	1 complicated with abscess, 1 ligature.
...	4	...	...	...	...	...	...	5	...	...	...	Of lower extremity.
5	3	...	...	...	...	...	...	10	...	...	...	4 from varicose veins, 1 from hand, scalp, and rectum after wound, 1 from gums in a subject of hæmorrhagic diathesis, 2 after tooth extraction.
4	...	...	...	...	...	...	...	7	1	...	...	In 3 plugging of nares.
4	1	...	1	...	...	...	...	9	3	...	...	2 inguinal, 2 axillary, 1 popliteal, the rest cervical.
2	1	2	...	...	...	...	...	4	1	...	...	1 elbow, 1 axillary, the rest cervical.
...	1	...	...	...	...	...	...	2	...	...	...	Of arm and leg.
2	1	4	...	...	...	...	...	6	1	...	...
...	1	...	1	...	...	...	...	2	...	...	...
1	...	...	...	...	...	...	...	...	1	...	...	Cystic.
...	1	...	...	...	...	...	...	...	1	...	...	Hysterical.
...	...	...	...	...	...	...	...	...	...	...	1	Tracheotomy.
...	1	...	...	...	...	...	...	...	1	...	...
...	...	...	...	...	...	...	...	...	...	...	1	Pressure of aneurism, tracheotomy.
2	4	4	...	...	...	...	...	18	...	...	5	See Special Table—Hernia, p. (328 ? <i>et seq.</i>).
4	4	9	1	...	...	...	...	17	...	...	2	
2	...	...	...	...	...	...	...	2	1	...	4	
4	1	...	...	...	...	...	...	6	5	...	...	3 inflamed, 5 irreducible.
2	2	1	...	...	...	...	...	3	2	...	...	All uncomplicated.
...	1	...	...	...	...	...	...	...	...	...	1	No operation, exhaustion.
1	...	...	...	...	...	...	...	...	1	...	...	Epiplocele.
8	5	2	1	...	...	...	...	20	...	...	...	7 complete, 18 operated upon.
...	1	...	...	...	...	...	...	...	1	...	...	? origin, unconnected with intestine.
5	4	1	...	...	...	...	...	10	1	...	...	3 complicated with prolapsus, 1 with vesical catarrh; 4 ligatured.
1	...	2	1	...	...	...	...	1	3	...	...	1 with prolapsus uteri, 1 with congenital scrotal hernia.
1	...	...	1	...	...	...	...	...	2	...	...	Syphilitic.
2	2	4	...	...	...	...	...	8	...	...	...	2 with hæmorrhoids, 2 division, 2 forcible dilatation.
1	2	...	...	...	...	...	...	1	1	...	1	Death due to acute bronchitis.
2	...	...	...	...	...	...	...	...	...	...	2	Abdominal section.
...	...	...	1	...	...	...	...	1	...	...	...	? nature; r. lumbar, colotomy.

TABLE I.—Abstract, showing Diseases, Injuries, &c., in

DISEASE.	Sex.		Age.									Duration before admission.							
	M.	F.	Under 5	5-10	-20	-30	-40	-50	-60	Above 60	Dys. 1-4	Dys. 5-13	Wks 2-4	Mts. 1-2	Mts. 2-6	Mts. 6-12	Chronic	Not re-	
GENITO-URINARY SYSTEM.																			
<i>Testicle—</i>																			
Orchitis (chronic)	3	...	...	...	...	...	1	1	1	...	...	...	...	1	1	...	1	
<i>Epididymis—</i>																			
Epididymitis	2	...	...	...	...	...	2	...	...	...	...	...	...	...	2	...	...
<i>Scrotum, &c.—</i>																			
Hydrocele	5	...	...	...	...	...	1	3	1	...	...	...	...	...	...	1	4	
Hæmatocele	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1	
Varicocele	2	...	...	...	1	1	...	...	...	...	...	...	...	1	...	...	1	
Phimosis	10	...	2	4	3	1	...	...	...	...	...	1	...	...	...	...	7	
Paraphimosis	1	...	...	1	...	...	...	...	...	...	...	1	...	...	...	...	...
Rupture of perineum	...	6	...	...	...	2	3	...	1	...	...	...	...	1	2	...	3	
Displacement of uterus	...	4	...	...	1	1	1	...	1	...	...	...	...	...	...	...	4	
Vesico-vaginal fistula	...	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1	
<i>Bladder—</i>																			
Cystitis	6	2	1	1	...	3	1	...	1	1	...	1	...	2	1	...	3		
Calculus	11	1	3	1	2	...	1	1	3	1	...	...	...	2	1	...	7	
<i>Urethra—</i>																			
Calculus	3	...	1	...	...	1	...	...	...	1	...	...	1	...	...	...	1	
Stricture	32	...	...	1	...	8	10	9	1	3	...	...	...	...	...	...	30	
Retention	20	...	...	1	1	6	5	3	...	4	18	...	...	...	...	...	...
Extravasation of urine	3	...	1	...	...	1	1	...	...	...	2	1	...	...	...	...	...
Urinary fistula	10	...	...	...	1	2	4	1	2	...	...	1	1	1	5	...	1	
Perineal abscess	2	...	...	...	...	...	...	1	...	1	1	...	...	...	...	...	...
Hæmaturia	2	...	...	...	1	...	1	...	...	...	1	...	...	...	...	...	...
Dysuria	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...	
OTHER AFFECTIONS OF GENERATIVE ORGANS.																			
Gonorrhœa	...	39	...	...	18	11	...	...	...	...	1	7	12	1	7	4	1	
Soft sore	3	33	...	...	24	9	1	1	1	...	4	9	7	9	3	1	1	
Warts	1	5	...	...	5	1	...	...	...	...	...	...	...	2	3	1	...	
Labial abscess, &c.	...	9	...	...	7	1	1	...	...	...	1	4	2	1	1	...	...
Bubo	...	9	...	...	5	4	...	...	...	...	...	4	1	1	1	...	...

Classes, according to authorised Nomenclature—continued.

Duration of residence.								Result.				Remarks.
Dys 5-13	Wks 2-4	Mts. 1-2	Mts. 2-4	Mts. 4-6	Mts. 6-9	Mts. 9-12	Above a year.	C.	R.	U.	D.	
1	1	1	...	...	...	...	...	2	1	...	...	2 syphilitic, 1 malignant.
1	1	...	...	...	...	...	...	1	1	...	...	Tubercular.
1	...	3	...	...	...	...	...	4	...	...	1	1 double, 4 radical cure: 2 injected, 2 laid freely open by Volckmann's method.
...	...	1	...	...	...	...	...	1	...	...	...	Veins included in sutures.
...	...	2	...	...	...	...	...	2	...	...	...
3	2	2	...	...	...	...	...	9	1	...	...	9 circumcision.
1	...	...	...	...	...	...	...	1	...	...	...	With soft sores.
...	1	3	2	...	...	...	...	3	3	...	...	In 4 operation.
1	...	...	...	...	...	...	...	...	1	3	...	1 prolapsus after rupture of perinæum, 2 retro-version.
...	...	1	...	...	...	...	...	1	...	...	...
3	1	2	2	...	...	...	...	7	1	...	...	5 vesical catarrh, 3 subacute.
1	3	6	1	1	...	...	...	9	2	...	1	Death, æt. 83, broncho-pneumonia; 6 lithotomy, 2 lithotrity, 1 Clover's injection, 2 ? calculus.
2	1	...	...	...	...	...	...	3	...	...	...	All extracted, 1 with three calculi.
2	19	7	3	1	...	...	...	25	4	...	3	5 internal urethrotomy, 1 cystotomy, 3 perineal section; deaths due to cystitis and bronchitis.
1	8	1	2	...	...	...	...	16	2	...	2	In 2 perineal section, 1 aspiration; 1 died of cystitis and uræmia, 1 of acute blood poisoning.
...	2	...	...	...	...	...	...	1	...	...	2	Deaths, uræmia and cystitis.
...	3	3	2	2	...	...	...	9	...	...	1	Perineal, 1 cauterized, 3 perineal section.
...	2	...	...	...	...	...	...	2	...	...	...	Complicated with hernia and hæmorrhoids.
...	...	...	...	...	...	...	...	2	...	...	...	1 after old lithotomy, 1 ? ruptured.
...	...	1	...	...	...	...	...	1	...	...	...	Renal.
2	17	14	4	...	1	...	...	37	2	...	...	7 with bubo, 3 phagedænic, 1 with gonorrhœal rheumatism.
3	12	15	5	1	...	...	...	36	...	...	...
...	1	3	1	1	...	...	...	6	...	...	...	1 virulent, 4 with syphilis.
1	3	4	...	...	...	...	...	8	1	...	...
1	4	2	1	1	...	...	...	9	...	...	...

TABLE I.—*Abstract, showing Diseases, Injuries, &c., in*

DISEASE.	Sex.		Age.								Duration before admission.						
	M.	F.	Under 5	5-10	-20	-30	-40	-50	-60	Above 60	Dys. 1-4	Dys. 5-13	Wks. 2-4	Mts. 1-2	Mts. 2-6	Mts. 6-12	Chronic
DISEASES OF LOCOMOTORY SYSTEM.																	
<i>Bones—</i>																	
Periostitis of—																	
<i>a.</i> Ilium	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...
<i>b.</i> Femur (acute) . . .	4	...	2	1	1	...	...	...	...	...	...	1	2	1	...	...	...
<i>c.</i> Tibia (acute) . . .	1	...	...	...	...	1	...	...	...	...	...	...	1	...	...	...	...
" (chronic)	3	...	...	...	1	...	1	1	...	...	...	...	...	...	...	...	3
<i>d.</i> Fibula	1	1	...	...	2	...	...	...	...	...	...	...	1	...	1	...	...
<i>e.</i> Ulna (acute) . . .	1	...	...	...	1	...	...	...	...	...	...	1	...	...	...	...	...
<i>f.</i> Scapula . . . . .	...	1	1	...	...	...	...	...	...	...	...	...	...	1	...	...	...
<i>g.</i> Ribs (acute) . . .	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...
Ostitis of—																	
<i>a.</i> Tibia	1	1	...	...	...	1	...	1	...	...	...	...	...	...	...	1	1
<i>b.</i> Superior maxilla .	...	1	...	...	...	...	...	...	1	...	...	...	...	...	...	1	...
Necrosis of—																	
<i>a.</i> Nares . . . . .	...	1	...	...	1	...	...	...	...	...	...	...	...	...	1	...	...
<i>b.</i> Skull	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...
<i>c.</i> Superior maxilla .	1	1	...	1	1	...	...	...	...	...	...	...	...	1	...	...	...
<i>d.</i> Inferior maxilla .	5	...	1	1	...	2	1	...	...	...	...	...	...	...	2	...	3
<i>e.</i> Clavicle . . . . .	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
<i>f.</i> Radius . . . . .	...	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...	1
<i>g.</i> Metacarpal bone, &c.	1	1	1	1	...	...	...	...	...	...	...	1	...	...	...	...	1
<i>h.</i> Ribs	1	2	...	...	...	2	1	...	...	...	...	...	...	...	...	...	2
<i>j.</i> Ilium	3	...	...	1	1	1	...	...	...	...	...	...	...	...	...	1	2
<i>k.</i> Femur	5	...	...	1	2	...	2	...	...	...	...	...	...	...	...	1	4
<i>l.</i> Tibia	7	4	...	3	6	1	1	...	...	...	...	...	1	2	2	1	2
<i>m.</i> Os calcis, &c. . .	4	1	1	...	2	1	...	1	...	...	...	...	...	...	1	2	2
Caries of—																	
<i>a.</i> Temporal bone . .	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1	...
<i>b.</i> Metacarpus . . .	1	1	1	...	1	...	...	...	...	...	...	...	1	...	...	1	...
<i>c.</i> Finger . . . . .	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...
<i>d.</i> Femur . . . . .	...	1	...	...	1	...	...	...	...	...	...	...	...	1	...	...	...
<i>e.</i> Tibia	1	...	...	...	1	...	...	...	...	...	...	...	...	1	...	...	...
<i>f.</i> Tarsus	8	1	1	3	3	...	1	...	...	1	...	...	1	1	1	...	4
<i>g.</i> Metatarsus . . .	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1
<i>Joints—</i>																	
Shoulder—																	
<i>a.</i> Incipient	2	1	...	...	...	2	...	1	...	...	...	...	...	...	3	...	...
<i>b.</i> Chronic . . . . .	...	2	...	...	...	2	...	...	...	...	...	...	...	...	...	...	2
<i>c.</i> Anchylosis . . . .	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...
Elbow—																	
Chronic	9	6	1	1	4	5	4	...	...	...	...	...	...	2	3	3	6

Classes, according to authorised Nomenclature—continued.

Duration of residence.								Result.				Remarks.
Dys. 13	Wks 2-4	Mts. 1-2	Mts. 2-4	Mts. 4-6	Mts. 6-9	Mts. 9-12	Above a year.	C.	R.	U.	D.	
...	1	1	2 syphilitic.
...	1	2	1	...	...	...	...	4	...	...	...
1	...	...	...	...	...	...	...	...	1	...	...
1	1	1	...	...	...	...	...	1	2	...	...
...	...	2	...	...	...	...	...	2	...	...	...
...	1	...	...	...	...	...	...	1	...	...	...
...	1	1	Syphilitic.
...	...	1	...	...	...	...	...	1	...	...	...
...	...	1	...	...	...	...	...	1	...	...	...
...	...	1	...	1	1	1	Of base. 1 with suppuration of antrum. In 2 sequestrotomy.
1	...	...	...	...	...	...	...	...	1	...	...
...	...	...	1	...	...	...	...	...	1	...	...
...	1	1	Lower third.
...	...	...	...	...	...	...	...	...	1	...	...
1	...	...	...	...	...	...	...	2	...	...	...
...	...	1	2	In all bone removed. 2 of ilium, 1 of pubes. 1 necrosis of stump, 3 sequestrotomy, 1 amputation of thigh.
...	4	1	...	...	...	...	...	1	4	...	...
...	...	1	...	...	...	...	...	1	...	...	...
...	1	1	1 died of lardaceous disease. 1 extirpation of os calcis.
1	...	...	...	...	...	...	...	2	...	...	...
1	...	1	1	...	...	...	...	3	...	...	...
...	...	1	...	1	3	2 Syme's amputation, 1 excision of os calcis.
1	...	1	2	...	...	1	...	2	3	...	...
...	...	5	3	2	1	...	...	5	5	...	1
1	1	...	1	2	5	Amputation.
...	...	...	1	...	...	...	...	1	...	...	...
...	1	...	...	...	...	1	...	2	...	...	...
...	1	1	2 Syme's amputation, 1 excision of os calcis.
...	...	1	...	...	...	...	...	1	...	...	...
3	1	2	1	2	...	...	...	7	2	...	...
...	...	1	1	1 excision. Fatal case: pneumonia.
...	
...	1	...	1	...	...	...	...	...	1	...	1
...	1	1	3 excision, 2 partial.
3	4	2	3	3	...	...	...	9	6	...	...

Classes, according to authorised Nomenclature—continued.

Duration of residence.								Result.				Remarks.
Dys. 5-13	Wks 2-4	Mts. 1-2	Mts. 2-4	Mts. 4-6	Mts. 6-9	Mts. 9-12	Above a year.	C.	R.	U.	D.	
1	2	1	...	...	...	...	...	1	3	...	...	All synovial.
1	...	...	...	...	...	...	...	...	1	...	...
3	4	5	1	2	5	3	1	10	10	1	5	Of the fatal cases 1 excision.
...	8	3	4	5	5	3	1	14	14	...	2	Fatal cases: tuberculosis and amyloid disease.
...	...	3	...	...	...	...	...	2	2	...	...
...	1	...	...	...	...	...	...	1	...	...	...	With anchylosis.
...	...	...	1	...	...	...	...	...	1	...	...
2	6	9	4	...	1	...	...	19	4	...	...	All synovial; 2 gonorrhœal rheumatism, 1 acute suppurative synovitis.
4	14	8	8	4	1	1	...	22	17	...	2	8 excision, 3 amputation of thigh. Fatal cases: 1 of collapse after incision, 1 of hæmorrhage after excision.
...	...	...	...	1	...	...	...	1	...	...	...
...	1	1	1	1	...	...	...	2	3	...	...	2 hydrops articuli, 1 excision of knee.
1	...	...	...	1	...	...	...	1	1	...	...	1 partial excision, 1 forcible flexion.
...	...	1	...	...	...	...	...	1	...	...	...	Cyst of synovial membrane removed.
...	2	1	...	...	...	...	...	1	2	...	...	Synovial disease; 1 gonorrhœal rheumatism.
1	1	...	1	1	...	...	...	4	...	...	...	1 Syme's amputation, 1 incision.
...	1	...	...	...	...	...	...	...	1	...	...	Chronic synovitis.
...	1	...	...	1	...	...	...	1	1	...	...	1 amputation, 1 excision.
2	4	4	1	...	1	...	...	7	7	...	...	7 psoas abscess, 1 double psoas, 1 gluteal, 1 iliac abscess.
1	...	1	2	1	...	...	...	4	1	...	1	2 lumbar, 1 gluteal, 1 psoas, 1 cervical abscess.
2	1	1	...	...	...	...	...	2	4	...	...
...	3	...	1	...	...	...	...	3	1	...	...	4 tenotomy, 1 of which Syme's amputation was performed on account of extreme atrophy of leg.
...	3	1	...	...	...	...	...	2	2	...	...	Tenotomy in 2.
1	1	1	...	...	...	...	...	1	2	...	...	1 infantile paralysis.
2	1	3	1	...	...	...	...	1	7	...	...	4 tenotomy.
...	1	...	...	...	...	...	...	...	1	...	...	Contraction of plantar fascia after infantile paralysis, with displacement of os calcis.
...	...	1	...	...	...	...	...	...	1	...	...	Division of plantar fascia.
...	1	1	...	...	1	...	...	3	...	...	...	1 following bullet wound, 2 after lupus of nose.
...	1	...	...	...	...	...	...	...	1	...	...	Syphilitic aperture.
...	...	...	1	...	...	...	...	...	1	...	...	After burn.

TABLE I.—Abstract, showing Diseases, Injuries, &c., in

DISEASE.	Sex.		Age.								Duration before admission.						
	M.	F.	Under 5	5-10	-20	-30	-40	-50	-60	Above 60	Dys. 1-4	Dys. 5-13	Wks 2-4	Mts. 1-2	Mts. 2-6	Mts. 6-12	Chronic
DEFORMITIES—continued.																	
Deformity of knee after excision . . .	1	2	...	1	2	...	...	...	...	...	...	...	...	...	...	...	3
Deformity of leg . . .	1	...	1	...	...	...	...	...	...	...	...	...	...	...	1	...	...
" forearm . . .	2	4	1	...	3	...	1	1	...	...	...	...	...	5	1	...	...
Curved tibia . . .	2	7	6	2	1	...	...	...	...	...	...	...	...	...	...	...	9
Genu valgum . . .	18	10	14	10	3	1	...	...	...	...	...	...	...	...	1	2	23
" varum . . .	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1
Infantile paralysis . . .	2	...	...	1	...	1	...	...	...	...	...	...	...	...	...	...	2
MALFORMATIONS.																	
Cleft palate . . .	9	2	5	1	4	1	...	...	...	...	...	...	...	...	...	...	11
Harelip, single . . .	2	3	5	...	...	...	...	...	...	...	...	...	...	...	...	...	5
" double . . .	2	2	4	...	...	...	...	...	...	...	...	...	...	...	...	...	4
Ear . . .	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1
Hand . . .	1	1	2	...	...	...	...	...	...	...	...	...	...	...	...	...	2
Toe . . .	...	2	...	...	2	...	...	...	...	...	...	...	...	...	...	...	2
Extroversio vesicæ . . .	4	...	3	...	1	...	...	...	...	...	...	...	...	...	...	...	4
Branchial fistula (patent) . . .	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1
APPENDAGES TO MUSCULAR SYSTEM.																	
Bursa prepatellaris, enlarged . . .	...	3	...	...	...	3	...	...	...	...	...	1	...	...	...	1	1
" inflamed . . .	2	3	...	...	2	2	...	1	...	...	2	3	...	...	...	...	...
" suppurating . . .	6	5	...	1	5	3	1	1	...	...	4	3	2	...	...	...	...
Bursa olecranon, suppurating . . .	1	...	...	...	...	...	...	1	...	...	1	...	...	...	...	...	...
Ganglion of wrist . . .	1	1	...	...	...	1	...	...	...	1	...	...	1	...	1	...	...
Thæcal abscess . . .	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...
CELLULAR TISSUE.																	
Inflammation . . .	7	1	...	1	2	2	1	1	1	...	4	...	1	...	1	...	...
Cellulitis . . .	10	9	...	1	4	3	4	3	3	1	4	6	3	3	...	...	...
Anthrax . . .	1	1	...	...	...	1	...	...	...	1	...	1	1	...	...	...	...
Abscess—																	
<i>a.</i> Neck and Face . . .	3	4	...	...	2	3	...	1	...	1	...	1	...	...	2	...	2
<i>b.</i> Shoulder . . .	...	2	2	...	...	...	...	...	...	...	1	...	1	...	...	...	...
<i>c.</i> Arm and hand . . .	4	4	2	1	1	2	2	...	...	...	...	4	4	...	...	...	...
<i>d.</i> Chest . . .	1	1	2	...	...	...	...	...	...	...	1	...	...	...	...	...	...
<i>e.</i> Abdominal walls . . .	1	...	...	...	...	1	...	...	...	...	...	...	...	1	...	...	...
<i>f.</i> Lumbar . . .	3	...	...	3	...	...	...	...	...	...	...	...	3	...	...	...	...
<i>g.</i> Gluteal . . .	1	1	1	...	...	...	1	...	...	...	1	...	...	1	...	...	...

Classes, according to authorised Nomenclature—continued.

Duration of residence.								Result.				Remarks.
Dys. 5-13	Wks 2-4	Mts. 1-2	Mts. 2-4	Mts. 4-6	Mts. 6-9	Mts. 9-12	Above a year.	C.	R.	U.	D.	
...	...	1	1	1	...	...	...	3	...	...	...	Subcutaneous section above condyles in two cases.
...	...	...	...	...	...	...	...	...	1	...	...
...	...	4	...	...	...	...	...	2	2	2	...	1 resection, 1 forcible straightening.
2	...	...	5	2	...	...	...	3	5	1	...	6 osteotomy, 2 bilateral.
...	6	6	12	3	...	...	...	17	9	2	...	16 subcutaneous osteotomy.
...	...	...	...	...	1	...	...	1	...	...	...	Osteotomy.
...	1	...	1	...	...	...	...	1	1	...	...	Amputation in 1.
2	3	2	2	1	...	...	...	8	2	1	...	9 operated upon.
...	1	2	...	...	...	...	...	4	...	1	...	
...	2	2	...	...	...	...	...	3	...	...	1	Death: pleuropneumonia.
...	...	...	...	...	...	...	...	...	...	1	...	Ill developed, and upper part of prima deflected downwards.
1	1	...	...	...	...	...	...	1	1	...	...	Fingers coherent, supernumary thumb.
...	...	2	...	...	...	...	...	2	...	...	...	Hammer toe.
...	...	1	1	2	...	...	...	1	2	1	...	3 operated upon.
...	...	1	...	...	...	...	...	1	...	...	...	Sinus in neck.
1	1	1	...	...	...	...	...	2	1	...	...	1 removed, 1 tapped.
2	2	1	...	...	...	...	...	5	...	...	...
3	4	4	...	...	...	...	...	11	...	...	...
1	...	...	...	...	...	...	...	1	...	...	...
1	1	...	...	...	...	...	...	2	...	...	...	1 freely incised.
...	1	...	...	...	...	...	...	1	...	...	...
3	3	1	...	...	...	...	...	8	...	...	...	Of arm, leg, thigh, foot, and penis.
7	6	3	1	...	...	...	...	10	1	...	2	Death from septicæmia and gangrene of lungs.
...	...	...	...	...	...	...	...	1	1	...	...	Of hand and back.
5	...	2	...	...	...	...	...	4	2	...	1	
...	1	...	...	1	...	...	...	2	...	...	...
3	4	...	1	...	...	...	...	7	...	...	1	Fatal case: cystitis, pyelitis, &c.
1	...	...	...	...	...	...	...	1	...	...	1	
...	1	...	...	...	...	...	...	1	...	...	...
...	...	2	1	...	...	...	...	2	1	...	...	Free incision in 2.
1	...	...	...	...	...	...	...	...	...	...	2	Acute peritonitis, pneumonia.

TABLE I.—*Abstract, showing Diseases, Injuries, &c., in*

DISEASE.	Sex.		Age.								Duration before admission.						
	M.	F.	Under 5	5-10	-20	-30	-40	-50	-60	Above 60	Dys. 1-4	Dys. 5-13	Wks 2-4	Mts. 1-2	Mts. 2-6	Mts. 6-12	Chronic
CELLULAR TISSUE— <i>continued</i>																	
Abscess—																	
h. Ischio-rectal.	3	...	...	...	...	2	...	1	...	...	...	...	...	1	1	...	1
j. Hip	1	1	1	1	...	...	...	...	...	...	...	...	1	1	...	...	...
k. Thigh	6	...	1	1	2	...	1	1	...	...	...	1	2	2	...	...	...
l. Knee	3	3	...	...	4	...	...	2	...	...	...	...	1	2	1	...	2
m. Leg	5	1	1	...	4	1	...	...	...	...	...	2	...	1	...	...	1
n. Foot	4	1	...	...	1	1	2	...	1	...	1	1	1	...	...	...	1
Sinus	1	3	...	...	4	...	...	...	...	...	...	...	...	1	1	1	1
CUTANEOUS SYSTEM.																	
Ulcer of—																	
a. Scalp	2	1	...	...	1	...	2	...	...	...	...	...	...	...	1	1	1
b. Face	1	2	...	1	1	1	...	...	...	...	...	...	1	1	1	...	...
c. Arm	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
d. Thigh	2	1	...	...	...	1	1	...	1	...	...	...	...	1	...	...	1
e. Leg	11	5	...	1	1	4	4	2	4	...	...	...	2	2	4	2	6
f. Foot	7	6	...	...	2	2	2	1	4	2	...	1	2	2	4	2	2
Onychia	1	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...	...
Eruption on hand	2	...	...	1	...	1	...	...	...	...	...	1	...	...	...	...	...
Noma ani . . . . .	...	1	1	...	...	...	...	...	...	...	...	1	...	...	...	...	...
Gangrene	1	...	...	...	...	...	...	...	1	...	...	...	1	...	...	...	...
Ingrowing toe-nail . . . . .	...	1	...	...	...	1	...	...	...	...	...	...	...	1	...	...	...
Eczema	2	1	...	...	...	2	1	...	...	...	...	...	...	...	...	...	3
MISCELLANEA.																	
Medical cases	5	3	...	...	2	3	1	1	1	...	...	...	2	...	1	...	3
Trivial	10	4	2	3	1	4	...	1	1	2	4	1	...	...	...	...	5

Classes, according to authorised Nomenclature—continued.

Duration of residence.								Result.				Remarks.
Dys. 5-13	Wks 2-4	Mts. 1-2	Mts. 2-4	Mts. 4-6	Mts. 6-9	Mts. 9-12	Above a year.	C.	R.	U.	D.	
1	...	1	2	1	Periarticular. 3 traumatic. Incision in all.
...	...	...	2	...	...	...	...	2	...	...	...
1	3	2	...	...	...	...	...	6	...	...	...
...	2	3	...	...	1	...	...	6	...	...	...
1	2	3	6	2 suppuration over extensors, 2 sloughing. Of mamma, knee, thigh, and abdomen; the latter after hydatid of liver.
...	2	2	1	...	...	...	...	4	1	...	...
1	1	...	...	2	...	...	...	2	2	...	...
...	
...	...	2	...	1	2	1	2 syphilitic of scalp, 1 following angioma. 1 each ? syphilitic of chin, of lip, of cheek. Syphilitic. 1 syphilitic, 1 of stump, 1 after burn.
...	...	3	...	...	...	...	...	2	1	...	...
...	...	...	1	...	...	...	...	1	...	...	...
...	...	2	...	...	...	...	...	2	1	...	...
3	5	4	2	12	4	2 of stump, 1 elephantiasis, in 1 amputation. 3 perforating. Syphilitic of toe. Psoriasis, vesication. After measles. General atheroma, cystitis, and pyelitis. Excision. 1 each general, of stump, of leg.
2	6	3	2	...	...	...	...	9	4	...	...
...	1	...	...	...	...	...	...	1	...	...	...
...	...	2	...	...	...	...	...	2	...	...	...
...	...	1	1	Fatal cases: dysentery with hepatic abscess; omental hydatids, abdominal section. Death: chronic otitis, meningitis.
...	...	1	...	...	...	...	...	...	...	...	1
1	...	...	...	...	...	...	...	1	...	...	...
1	...	...	2	...	...	...	...	3	...	...	...
2	...	2	1	3	2	1	2	Fatal cases: dysentery with hepatic abscess; omental hydatids, abdominal section. Death: chronic otitis, meningitis.
3	2	1	...	...	...	...	...	7	3	3	1

TABLE II.—

INJURIES.	Sex.		Ages.								Duration before admission.						
	M.	F.	Under 5	5-10	-20	-30	-40	-50	-60	Above 60	Under 1 hour.	Hrs. 1-6	Hrs. 7-12	Hrs. 13-24	Dys. 1-3	Dys. 3-6	Above 6 days.
GENERAL INJURIES.																	
Burns . . .	14	19	11	11	4	1	2	1	...	3	16	9	4	...	...	...	1
Scalds . . .	12	11	18	3	1	1	...	...	...	...	13	3	2	...	...	...	...
LOCAL INJURIES.																	
<i>Injuries of the head—</i>																	
Scalp wound . . .	47	13	4	1	8	17	15	4	4	7	30	17	9	1	1	...	...
Scalp contusion . . .	8	2	2	2	3	...	2	1	...	...	7	3	...	...	...	...	...
Wound of artery . . .	1	...	...	...	1	...	...	...	...	...	1	...	...	...	...	...	...
Fracture of vault . . .	19	1	4	1	8	3	1	1	1	1	14	4	...	...	...	...	...
„ base . . .	16	...	1	...	4	3	5	1	1	1	12	4	...	...	...	...	...
Concussion . . .	41	19	10	8	13	17	6	4	2	...	34	20	...	...	...	...	...
<i>Injuries of the face—</i>																	
Wound . . .	14	2	3	...	1	4	4	1	1	2	10	6	...	...	...	...	...
„ of artery . . .	...	1	...	...	...	...	...	1	...	...	1	...	...	...	...	...	...
Contusion . . .	4	3	...	...	2	1	3	1	...	...	4	3	...	...	...	...	...
<i>Fracture of—</i>																	
Superior maxilla . . .	1	1	...	...	1	1	...	...	...	...	2	...	...	...	...	...	...
Inferior maxilla . . .	5	1	...	...	4	...	2	...	...	...	5	...	1	...	...	...	...
Malar . . .	1	...	...	...	1	...	...	...	...	...	1	...	...	...	...	...	...
Nasal . . .	1	...	...	...	...	1	...	...	...	...	1	...	...	...	...	...	...
<i>Injuries of the eye—</i>																	
Wound of globe . . .	4	1	...	1	...	2	1	...	...	1	3	2	...	...	...	...	...
Contusion of lids . . .	2	...	...	...	...	...	1	1	...	...	2	...	...	...	...	...	...
<i>Injuries of the neck—</i>																	
Wound . . .	4	4	...	...	...	1	1	2	3	1	4	2	...	...	2	...	...
Sprain . . .	2	...	...	...	...	1	...	1	...	...	...	...	...	...	...	1	1
<i>Injuries of the chest—</i>																	
Wound . . .	3	1	...	...	4	...	...	...	...	...	3	1	...	...	...	...	...
Contusion . . .	4	2	...	...	...	3	2	1	...	...	5	...	...	...	...	...	...
Fracture of rib . . .	22	5	3	...	2	4	12	1	3	2	20	6	...	...	...	...	...
<i>Injuries of the back—</i>																	
Wound . . .	2	...	...	...	1	1	...	...	...	...	2	...	...	...	...	...	...
Contusion, &c. . .	18	4	2	3	1	7	5	1	1	2	17	3	...	...	...	...	...

Injuries.

Duration of residence.									Result.				Remarks.
Dys. 5-13	Wks 2-4	Mts. 1-2	Mts. 2-4	Mts. 4-6	Mts. 6-9	Mts. 9-12	Above a year.		C.	R.	U.	D.	
8	2	8	4	...	...	...	...	19	...	...	...	14	Deaths; 9 under 8 years of age; collapse.
8	8	2	...	...	...	...	...	18	1	...	...	4	1 of œsophagus, 1 of pharynx in which tracheotomy was done.
12	13	3	2	...	...	...	...	59	...	...	...	1	8 bone bare, 1 delirium tremens, 1 died laceration of brain.
...	...	...	...	...	...	...	...	10	...	...	...	...	2 with hæmatoma.
...	...	...	...	...	...	...	...	1	...	...	...	...	Of anterior temporal.
3	4	7	...	...	...	...	...	15	...	2	3	...	6 trephined, 1 death from gun-shot wound.
...	5	5	...	...	...	...	...	10	...	...	6	...	5 ? fracture, 1 gun-shot wound.
23	5	2	...	...	...	...	...	57	2	...	1	...	Death: laceration of brain, hæmorrhage.
6	2	2	...	...	...	...	...	15	1	...	...	...	1 complicated with erysipelas, 1 with delirium tremens.
1	...	...	...	...	...	...	...	1	...	...	...	...	Of facial.
3	...	...	...	...	...	...	...	6	...	...	...	1	
...	...	1	...	...	...	...	...	2	...	...	...	...
4	...	2	...	...	...	...	...	5	1	...	...	...	In 1 fracture of superior maxilla, 1 bilateral, 1 at symphysis.
...	1	...	...	...	...	...	...	1	...	...	...	...	Compound depressed.
1	...	...	...	...	...	...	...	1	...	...	...	...	With contusion of forearm.
4	1	...	...	...	...	...	...	5	...	...	...	...	3 extirpation.
...	...	...	...	...	...	...	...	2	...	...	...	...
2	5	...	...	...	...	...	...	8	...	...	...	...	All self-inflicted, 2 into air passages.
2	...	...	...	...	...	...	...	1	1	...	...	...	One of 8 months' standing.
2	...	...	...	...	...	...	...	4	...	...	...	...	1 gun-shot, 1 by needle, 1 stab, 3 penetrating.
...	...	...	...	...	...	...	...	6	...	...	...	...	None severe.
7	10	4	...	...	...	...	...	23	...	...	4	...	4 emphysema, 3 hæmoptysis, 1 rupture liver, 2 hæmaturia, 1 rupture diaphragm, &c., 1 peritonitis.
...	1	1	...	...	...	...	...	2	...	...	...	...	1 incised, 1 punctured.
4	5	3	...	...	...	...	...	22	...	...	...	...	3 sprained.

TABLE II—

INJURIES.	Sex.		Ages.									Duration before admission.						
	M.	F.	Under 5	5-10	-20	-30	-40	-50	-60	Above 60	Under 1 hour.	Hrs. 1-6	Hrs. 7-12	Hrs. 13-24	Dys. 1-3	Dys. 3-6	Above 6 days.	Not re.
LOCAL INJURIES— <i>continued.</i>																		
<i>Injuries of the spine—</i>																		
Fracture	2	2	...	...	3	...	1	...	...	...	2	1	...	...	...	...	1	
Dislocation	2	...	...	...	...	1	...	1	...	...	...	...	...	1	1	...	...
Concussion	1	...	...	...	...	1	...	...	...	...	1	...	...	...	...	...	...
<i>Injuries of the abdomen—</i>																		
Contusion	24	5	4	10	3	7	2	2	1	...	15	7	...	...	...	1	2	
Wound	1	...	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...
<i>Injuries of the pelvis—</i>																		
Contusion	3	2	...	...	2	1	...	1	...	1	2	3	...	...	...	...	...
Wound	1	1	2	...	...	...	...	...	...	...	1	...	...	...	...	...	1	
Fracture	5	...	...	1	1	1	1	...	1	...	5	...	...	...	...	...	...
Wound of groin	1	...	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...
Contusion of labium . . . . .	...	1	...	...	...	1	...	...	...	...	1	...	...	...	...	...	...
Rupture of urethra	7	...	...	...	1	3	2	...	1	...	5	2	...	...	...	...	...
Wound of scrotum	2	...	...	...	2	...	...	...	...	...	2	...	...	...	...	...	...
Hæmatocele	1	...	...	...	1	...	...	...	...	...	1	...	...	...	...	...	...
UPPER EXTREMITY.																		
<i>Wounds of—</i>																		
a. Arm	7	8	2	3	4	2	2	2	...	...	9	3	...	...	...	1	...	
b. Hand	10	3	...	3	5	1	2	...	1	1	9	2	...	...	1	...	1	
c. Artery	6	6	...	1	3	4	3	...	1	...	7	2	...	...	...	...	1	
<i>Contusion of—</i>																		
a. Shoulder	1	...	...	...	...	...	...	...	...	1	1	...	...	...	...	...	...
b. Elbow	1	...	...	...	...	1	...	...	...	...	1	...	...	...	...	...	...
c. Arm	1	1	1	...	1	...	...	...	...	...	1	1	...	...	...	...	...
<i>Dislocation of—</i>																		
a. Scapula from clavicle	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...	1	...	
b. Humerus	1	1	...	...	...	...	...	1	1	...	1	...	...	...	...	...	1	
c. Forearm	2	...	...	...	1	1	...	...	...	...	1	...	...	...	...	...	1	
d. Phalanx	2	...	...	1	...	1	...	...	...	...	1	...	...	...	...	...	...
<i>Fracture of—</i>																		
a. Clavicle	6	3	...	...	1	...	4	4	...	...	6	2	1	...	...	...	...
b. Scapula	3	...	...	...	...	...	2	1	...	...	3	...	...	...	...	...	...
c. Humerus, simple	6	2	1	3	2	...	...	1	1	...	3	2	...	...	2	1	...	
„ comminuted	6	1	...	...	1	...	3	1	1	1	5	2	...	...	...	...	...
„ compound . . . . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
„ comminuted	4	...	...	...	1	...	1	1	1	...	3	...	...	...	...	...	...
„ ununited	2	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	2	
d. Radius	3	1	...	1	1	...	...	2	...	...	4	...	...	...	...	...	...
e. Ulna . . . . .	...	1	...	...	1	...	...	...	...	...	1	...	...	...	...	...	...

continued.

Duration of residence.									Result.				Remarks.
	Dys. 5-13	Wks 2-4	Mts. 1-2	Mts. 2-4	Mts. 4-6	Mts. 6-9	Mts. 9-12	Above a year.	C.	R.	U.	D.	
1	1	...	1	1	...	...	...	...	2	...	...	2	1 old case, 1 of dorso-lumbar region, cured; 1 of lower cervical, 1 of upper dorsal, both died.
1	1	...	1	...	...	...	...	...	2	...	...	...	1 rotatory displacement of lower cervical, 1 displacement of 1st dorsal.
1	...	...	...	...	...	...	...	...	1	...	...	...	of cervico-dorsal region.
9	12	6	2	...	...	...	...	...	24	2	...	2	Fatal cases: rupture of liver, acute peritonitis.
...	...	...	1	...	...	...	...	...	1	...	...	...
2	1	2	...	...	...	...	...	...	4	...	...	...	1 large contusion of buttock.
2	1	1	...	...	...	...	...	...	1	1	...	...	Of buttock.
2	...	1	2	...	...	...	...	...	3	...	...	2	Deaths: rupture of kidney, pneumothorax, shock.
...	1	...	...	...	...	...	...	...	1	...	...	...
...	...	1	...	...	...	...	...	...	1	...	...	...	Followed by sloughing.
1	2	4	...	...	...	...	...	...	7	...	...	...	Traumatic, in 2 perineal section.
...	2	...	...	...	...	...	...	...	2	...	...	...
1	...	...	...	...	...	...	...	...	1	...	...	...
2	5	5	2	1	...	...	...	...	15	...	...	...	3 amputated, 4 incised, the rest lacerated.
2	3	7	1	...	...	...	...	...	13	...	...	...	3 amputation of fingers.
4	7	...	1	...	...	...	...	...	12	...	...	...	6 of radial at wrist, 6 of palmar arch.
...	1	...	...	...	...	...	...	...	1	...	...	...
...	1	...	...	...	...	...	...	...	1	...	...	...	Hæmatoma.
1	1	...	...	...	...	...	...	...	1	...	...	...
1	...	...	...	...	...	...	...	...	...	...	1	...	? Of long duration; downwards.
1	1	...	...	...	...	...	...	...	2	...	...	...	Reduced by manipulation.
1	...	1	...	...	...	...	...	...	1	1	...	...	Of head of radius backwards, of both bones.
1	...	1	...	...	...	...	...	...	1	...	...	...	1 of 1st phalanx backwards, removal of head of metacarpal bone, 1 compound of middle phalanx.
1	3	4	1	...	...	...	...	...	8	1	...	...	4 comminuted, 1 incomplete.
1	1	1	...	...	...	...	...	...	2	1	...	...	1 of body, 1 lower angle, 1 vertebral border.
...	4	1	1	1	1	1	...	...	7	1	...	...	1 separation of lower epiphysis, 1 intracapsular.
1	3	2	1	...	...	...	...	...	6	1	...	...	1 fracture of neck of humerus, with dislocation.
...	...	...	3	...	...	...	...	...	4	...	...	...	3 into elbow, 1 followed by excision.
...	...	...	...	...	2	...	...	...	1	1	...	...	Both operated upon.
1	2	1	...	1	...	...	...	...	4	...	...	...	1 double Collis.
...	...	1	...	...	...	...	...	...	1	...	...	...	Also of internal condyle.

TABLE II—

[illegible]

continued.

Duration of residence.								Result.				Remarks.
Dys. 5-13	Wks 2-4	Mts. 1-2	Mts. 2-4	Mts. 4-6	Mts. 6-9	Mts. 9-12	Above a year.	C.	R.	U.	D.	
...	...	...	...	...	...	...	...	1	...	...	...	With dislocation of inferior rad-ulnar artic.
...	1	1	...	...	...	...	...	2	...	...	...	1 with simple fracture humerus.
1	1	1	...	...	...	...	...	2	1	...	1	Amputation in 3 cases.
1	...	1	...	1	...	...	...	3	...	...	...	Same patient.
...	...	...	1	...	...	...	...	1	...	...	...	Forcible re-fracture.
2	4	...	...	...	...	...	...	7	...	...	...	In 6 amputation of fingers.
1	...	...	...	...	...	...	...	1	...	...	...
1	1	...	...	...	...	...	...	2	...	...	2	2 shock, 1 in amputation.
1	2	6	1	...	...	...	...	11	...	...	...	In 1 bare bone, 1 amputated.
3	1	1	2	...	...	...	...	8	...	...	1	4 into joint. Death: collapse.
4	3	2	...	...	...	...	...	9	...	...	...	1 amputated, 1 from needle which was extracted.
1	1	...	...	...	...	...	...	3	1	...	...
2	1	...	...	...	...	...	...	6	...	...	...	3 hæmatoma.
8	2	...	...	...	...	...	...	16	...	...	1	4 hæmatoma, 1 with fractured rib.
1	2	3	...	...	...	...	...	11	...	...	...	2 hæmatoma of foot.
2	1	1	...	...	...	...	...	1	...	3	...	1 recent, 2 congenital, 1 of long duration.
1	1	...	...	...	...	...	...	1	...	1	...	1 recent, 1 since infancy; outwards.
2	1	...	...	...	...	...	...	2	1	...	...	1 internal cartilage, 1 external, 1 not reported.
...	...	1	...	...	...	...	...	1	...	...	...	Inwards.
...	2	...	...	...	...	...	...	2	...	...	...	1 inwards, 1 backwards, both with fracture of malleoli.
...	1	...	...	...	...	...	...	1	...	...	...	Reduction under chloroform.
1	2	3	21	8	1	1	...	34	1	...	2	4 extracapsular, 3 intracapsular, rest of shaft delayed union.
...	...	...	...	...	...	...	...	1	1	...	...
...	1	...	2	...	...	...	...	2	...	...	1	
...	...	1	...	...	...	...	...	1	...	...	1	
...	3	8	1	...	...	...	...	12	...	...	...	3 fractured the second time, 1 vertical, rest transverse.
2	7	14	1	1	...	...	...	19	6	...	...	Chiefly lower third.
...	...	...	2	...	...	...	...	2	...	...	...	1 into ankle-joint.
...	1	...	...	...	...	...	...	...	...	...	1	Acute septicaemia.
...	...	...	1	...	...	...	...	1	...	...	...

TABLE II.—

[illegible]

continued.

Duration of residence.								Result.				Remarks.
Yrs. 1-3	Wks 2-4	Mts. 1-2	Mts. 2-4	Mts. 4-6	Mts. 6-9	Mts. 9-12	Above a ear.	C.	R.	U.	D.	
20	21	2	...	...	...	...	...	34	13	...	...	1 with delirium tremens, 1 with outer displacement of foot.
	1	...	3	...	...	...	...	4	...	...	...	All at lower fourth.
4	17	5	1	1	...	...	...	47	3	...	...	1 with hæmatoma, 2 with delirium, 1 fractured rib, 4 displacement of foot, 3 delayed union.
1	1	6	2	2	...	...	...	11	...	...	1	2 amputation of leg.
...	1	1	...	...	...	...	...	2	...	...	...
1	...	4	1	2	1	...	...	7	...	...	3	Fatal cases : collapse, abscess of brain, secondary hæmorrhage. In 6 amputation.
1	1	1	...	...	...	...	...	3	...	...	...	2 of phalanx, 1 metatarsal.
...	3	...	...	...	...	...	...	2	...	...	...	Phalanges.
1	...	...	...	...	...	...	...	1	...	...	...	Astragalus and dislocation forwards and outwards.
1	1	2	...	1	...	...	...	4	...	...	1	All primary amputation.
1	...	1	...	...	...	...	...	3	...	...	...
17	10	1	...	...	...	...	...	30	...	...	...	1 fracture of 3rd rib, 1 followed by suppuration of joint.
3	1	1	...	...	...	...	...	9	1	...	...
...	1	1	...	...	...	...	...	2	...	...	...
...	...	...	1	...	...	...	...	...	...	...	1	Followed by erysipelas.
...	...	1	...	...	...	...	...	1	...	...	...
...	...	...	...	...	...	...	...	27	9	...	...
...	...	...	...	...	...	...	...	...	...	...	9	
								1747	332	52	142	= { Diseases... 980 ... 278 ... 45 ... 87 Injuries... 767 ... 54 ... 7 ... 65
								2273				

TABLE III.—

SURGICAL OPERATIONS.	Sex.		Ages.							
	M.	F.	Under 5	5-10	-20	-30	-40	-50	-60	
REMOVAL OF TUMOURS AND GROWTHS.										
Amputation of breast . . . . .	...	30	1	...	5	4	2	11	4
Removal of axillary glands . . . . .	...	3	...	...	...	...	...	1	2
For epithelioma of tongue	9	1	...	...	...	...	1	5	3
„ of lower lip	5	...	...	...	...	...	1	...	2
„ of vulva . . . . .	...	2	...	...	...	...	...	...	2
„ of anus	1	...	...	...	...	...	1	...	...
„ of rectum	1	1	...	...	...	...	...	2	...
„ of thigh	3	...	...	...	...	...	...	3	...
„ of scrotum and penis	2	...	...	...	...	...	...	1	...
„ of glands	1	...	...	...	...	...	...	...	...
For sarcoma of leg	2	1	...	2	...	...	...	...	...
„ of thigh	1	1	...	1	...	1	...	...	...
„ of groin . . . . .	...	1	...	...	...	...	...	1	...
„ of face	1	2	...	...	...	...	...	...	2
„ of jaw . . . . .	...	4	...	...	2	...	...	1	1
„ of parotid . . . . .	...	3	...	...	...	...	1	1	1
„ of scapula	1	1	...	...	...	...	...	...	...
„ of hand	1	...	...	...	...	...	...	1	...
„ of testis	1	...	...	...	...	...	...	1	...
For enchondroma of parotid . . . . .	...	3	...	...	...	1	...	...	1
For myxoma	1	1	...	...	...	...	1	1	...
For fibroma . . . . .	...	2	...	...	1	...	1	...	...
For lipoma	2	6	1	1	1	...	...	3	1
For lymphoma	1	3	...	...	1	3	...	...	...
For angioma	1	5	...	2	3	1	...	...	...
For nævus vascularis . . . . .	...	4	3	1	...	...	...	...	...
For rodent ulcer	1	2	...	...	...	...	...	1	2
For lupus	1	2	...	...	...	1	2	...	...
For polypus . . . . .	...	1	...	1	...	...	...	...	...
For exostosis	1	1	...	...	2	...	...	...	...
For molluscum	1	1	1	...	...	...	...	1	...
For cystic disease of ovary (ovariotomy) . . . . .	...	15	...	...	1	3	4	4	2
For fibroid disease of uterus (abdominal section) . . . . .	...	2	...	...	...	...	...	1	1
For sebaceous tumour	2	2	...	...	...	...	2	1	1
For hydatid cyst	1	...	...	...	...	...	1	...	...
For simple cyst	1	3	...	...	1	...	...	1	2
For enlarged bursa patellæ . . . . .	...	2	...	...	1	1	...	...	...
For ulcer following angioma . . . . .	...	1	...	...	1	...	...	...	...
For papilloma . . . . .	...	2	...	...	...	...	...	...	...

Surgical Operations.

Location of residence after operation.								Result.				Remarks.
Wks. 1-3	Wks. 2-4	Mts. 1-2	Mts. 2-4	Mts. 4-6	Mts. 6-9	Mts. 9-12	Above a year.	C.	R.	U.	D.	
3	10	16	...	1	...	...	...	28	...	...	2	17 for primary scirrhus, 1 recurrent, 4 sarcoma, 8 adenoma.
...	3	...	...	...	...	...	...	3	...	...	...	Scirrhus infiltration.
...	7	...	1	...	...	...	...	8	...	...	2	5 renewed with écraseur, 3 Langenbeck's operation.
4	1	...	...	...	...	...	...	4	1	...	...	4 removed by V-shaped incision, 1 recurrent and treated with actual cautery.
...	2	...	...	...	...	...	...	1	1	...	...	Removed with knife.
...	1	...	...	...	...	...	...	1	...	...	...	Died suddenly during operation.
...	1	...	...	...	...	...	...	...	1	...	1	3 operations on same patient for recurrence involving scar of burn.
...	...	...	1	1	1	...	...	1	2	...	...	1 recurrent, both removed.
...	...	2	...	...	...	...	...	2	...	...	...	Inguinal region.
1	...	...	...	...	...	...	...	...	1	...	...	1 subsequent amputation for hæmorrhage.
...	...	3	...	...	...	...	...	1	2	...	...	Melanotic.
...	...	2	...	...	...	...	...	2	...	...	...	1 epulis: osteo-sarcoma.
...	1	...	...	...	...	...	...	1	...	...	...	1 myxoma-sarcoma.
...	1	1	...	...	...	...	...	2	...	...	...	Both recurrent.
...	1	...	...	...	...	...	...	1	...	...	...	Myxoma-sarcoma.
...	...	1	...	...	...	...	...	1	...	...	...	Castration.
...	3	...	...	...	...	...	...	3	...	...	...	1 of thigh, 1 of leg.
...	...	2	...	...	...	...	...	2	...	...	...	Opulis of upper jaw.
1	...	...	...	...	...	...	...	2	...	...	...	Of neck, back, loin, thigh, and axilla.
2	4	1	...	...	...	...	...	8	...	...	...	Of neck, groin, and axilla.
3	1	...	...	...	...	...	...	4	...	...	...	Of neck, thigh, heel, back, and genitals.
...	3	3	1	...	...	...	...	6	1	...	...	Of scalp, leg, back, and face.
2	2	...	...	...	...	...	...	3	1	...	...	Removal by excision.
...	2	1	...	...	...	...	...	3	...	...	...	Thermo-cautère.
1	1	1	...	...	...	...	...	1	3	...	...	Rectum.
...	...	1	...	...	...	...	...	1	...	...	...	Of tibia and great toe.
1	...	1	...	...	...	...	...	2	...	...	...	Molluscum fibrosum.
1	1	...	...	...	...	...	...	1	1	...	...	1 incomplete ovariectomy.
2	1	10	1	...	...	...	...	11	1	...	3	Removal of uterus.
1	...	1	...	...	...	...	...	1	...	...	1	Pedunculated of thigh.
2	2	...	...	...	...	...	...	4	...	...	...	2 removed, 2 paracentesis.
...	...	1	...	...	...	...	...	1	...	...	...
...	3	1	...	...	...	...	...	3	1	...	...
...	2	...	...	...	...	...	...	2	...	...	...
...	...	1	...	...	...	...	...	1	...	...	...
1	1	...	...	...	...	...	...	2	...	...	...	Of external genitals; removed with knife.

TABLE III—

SURGICAL OPERATIONS.	Sex.		Ages.						
	M.	F.	Under 5	5-10	-20	-30	-40	-50	-60
CIRCULATORY SYSTEM.									
Ligature of artery	3	...	...	...	...	...	2	1	...
Obliteration of varicose veins	1	...	...	...	...	...	...	...	...
Plugging nares for epistaxis	3	...	...	...	1	...	2	...	...
RESPIRATORY SYSTEM.									
Tracheotomy	7	1	3	2	2	...	1	...	...
DIGESTIVE SYSTEM.									
Excision of tonsils . . . . .	...	1	...	...	1	...	...	...	...
Strangulated inguinal hernia	10	...	...	...	...	1	...	1	1
" femoral hernia	1	14	...	...	...	1	3	5	2
" umbilical hernia	1	2	...	...	...	...	...	...	...
Division of fistula in ano	18	2	...	...	1	6	4	7	1
Removal of hæmorrhoids	4	...	...	...	...	1	2	...	1
Division of stricture of rectum . . . . .	...	2	...	...	...	1	1	...	...
Fissure of anus	1	5	...	...	2	1	2	1	...
Colotomy	3	...	...	...	...	...	...	1	2
Abdominal section for stricture of rec- tum (1), and intussusception (2), &c.	4	...	2	...	1	...	1	...	...
GENITO-URINARY SYSTEM.									
Hydrocele tapping, with or without injec- tion of tunica vaginalis	4	...	...	...	...	1	...	2	1
Varicocele	2	...	...	...	1	1	...	...	...
Hæmatocele	1	...	...	...	...	1	...	...	...
Circumcision	14	...	5	4	3	...	2	...	...
Ruptured perineum . . . . .	...	4	...	...	...	1	2	...	1
Paracentesis of ovarian cyst . . . . .	...	3	...	...	...	...	1	1	1
Lithotomy (lateral)	6	...	1	1	1	...	1	...	1
Lithotrity	2	...	...	...	...	...	...	1	...
Urethral calculus	3	...	1	...	...	1	...	...	...
Calculus removed by Clover's injector	1	...	...	...	...	...	...	...	...
Internal urethrotomy	7	...	...	...	...	3	3	1	...
Cystotomy	1	...	...	...	...	...	1	...	...
Perineal section	13	...	...	...	...	2	3	3	...

continued.

Location of residence after operation.								Result.				Remarks.
Wks. 1-2	Mts. 1-2	Mts. 2-4	Mts. 4-6	Mts. 6-9	Mts. 9-12	Above a year.		C.	R.	U.	D.	
...	...	1	1	...	...	...	...	2	...	...	1	Of common carotid, 2 of femoral.
...	1	...	...	...	...	...	...	...	1	...	...
1	1	...	...	...	...	...	...	3	...	...	...
1	1	1	...	...	...	...	...	1	...	...	7	2 tetanus, 2 diphtheria, 1 hæmorrhage into glottis, scald of throat, 1 erysipelatous oedema of neck, 1 aneurism of aorta.
...	1	...	...	...	...	...	...	1	...	...	...
...	2	4	...	...	...	...	...	5	...	...	5	In 2 sac unopened. } See special Table, p (328)
...	5	8	1	...	...	...	...	13	...	...	1	In 5 sac opened. } <i>et seq.</i>
...	...	...	...	...	...	...	...	...	...	...	3	
4	9	3	2	...	...	...	...	20	...	...	...	8 complete.
1	3	...	...	...	...	...	...	4	...	...	...	4 ligatured.
...	...	...	2	...	...	...	...	...	1	...	1	
1	1	4	...	...	...	...	...	6	...	...	...	3 division, 3 forcible dilatation.
1	...	1	1	...	...	...	...	1	1	...	1	2 for stricture of rectum, 1 ? nature.
...	...	...	...	...	...	...	...	...	...	...	4	Peritonitis.
...	2	1	...	...	...	...	...	4	...	...	...	2 injected, 2 sac layed freely open on Volckmann's principal, and tunica vaginalis stitched to opposed skin and edges sutured together. Antiseptics.
...	2	...	...	...	...	...	...	2	...	...	...	Wire sutures and pins behind veins.
...	...	1	...	...	...	...	...	1	...	...	...	Volckmann's operation.
2	3	3	1	...	...	...	...	14	...	...	...	For phimosis.
...	1	3	...	...	...	...	...	3	1	...	...
1	1	...	...	...	...	...	...	...	2	...	1	1 died suddenly with pleurisy.
1	...	5	...	...	...	...	...	5	...	...	1	Fatal case: broncho-pneumonia.
1	...	1	...	...	...	...	...	2	...	...	...
1	1	...	...	...	...	...	...	3	...	...	...	In 2 meatus slit up and calculus removed.
1	...	...	...	...	...	...	...	1	...	...	...	4 small stones.
2	4	...	1	...	...	...	...	7	...	...	...	For stricture at membrano-bulbous portion.
...	...	...	1	...	...	...	...	1	...	...	...	For hæmorrhage after internal urethrotomy.
2	2	4	4	...	...	...	...	10	...	...	3	3 for stricture, 1 hæmorrhage into bladder, 3 for retention, 2 for fistulæ, 2 ruptured urethra, 1 extravasation.

TABLE III—

SURGICAL OPERATIONS.	Sex.		Ages.						
	M.	F.	Under 5	5-10	-20	-30	-40	-50	-60
GENITO-URINARY SYSTEM—<i>continued.</i>									
Cauterization of fistula	1	...	...	...	...	...	1	...	...
Aspiration of bladder	1	...	...	...	...	...	...	1	...
Warts (removal of)	1	3	...	...	3	1	...	...	...
Vesico-vaginal fistula . . . . .	...	1	...	...	...	...	...	1	...
Castration	1	...	...	...	...	...	...	1	...
LOCOMOTORY SYSTEM, &c.									
Removal of necrosed bone for disease of—									
<i>a.</i> Upper jaw	1	1	...	1	1	...	...	...	...
<i>b.</i> Lower jaw	2	...	...	1	...	1	...	...	...
<i>c.</i> Humerus	1	1	...	...	1	1	...	...	...
<i>d.</i> Metacarpus . . . . .	...	1	1	...	...	...	...	...	...
<i>e.</i> Clavicle . . . . .	...	1	...	...	...	1	...	...	...
<i>f.</i> Femur	5	...	...	2	...	...	3	...	...
<i>g.</i> Tibia	7	4	...	2	6	1	1	1	...
<i>h.</i> Os calcis	3	...	2	...	1	...	...	...	...
<i>j.</i> Radius . . . . .	...	1	...	...	...	...	...	...	...
<i>k.</i> Ribs	1	2	...	...	...	2	1	...	...
Caries of—									
<i>a.</i> Humerus	2	...	...	...	1	1	...	...	...
<i>b.</i> Metacarpus	1	...	1	...	...	...	...	...	...
<i>c.</i> Femur . . . . .	...	1	...	...	1	...	...	...	...
<i>d.</i> Tarsus	1	...	...	...	...	...	...	...	...
<i>e.</i> Tibia	1	...	...	...	1	...	...	...	...
<i>f.</i> Metatarsus	1	...	...	...	1	...	...	...	...
Excision of—									
<i>a.</i> Lower jaw . . . . .	...	1	...	...	1	...	...	...	...
<i>b.</i> Shoulder	1	1	...	...	...	2	...	...	...
<i>c.</i> Metacarpal bone	1	...	...	1	...	...	...	...	...
<i>d.</i> Elbow	3	1	...	...	1	1	1	...	1
<i>e.</i> Hip	11	6	6	9	1	1	...	...	...
<i>f.</i> Knee	3	7	...	3	1	3	3	...	...
<i>g.</i> Os calcis	2	...	...	...	2	...	...	...	...
<i>h.</i> Metatarso-phalangeal-joint	1	1	...	1	...	1	...	...	...
Tenotomy of biceps femoris	1	...	...	1	...	...	...	...	...
„ for club-foot	7	5	3	4	5	...	...	...	...
For ununited fracture of humerus	2	...	...	...	...	2	...	...	...
Resection of radius . . . . .	...	1	...	...	1	...	...	...	...
Subcutaneous division of femur	17	11	10	13	5	...	...	...	...
„ „ of tibia	3	6	5	2	...	...	...	2	...

continued.

Duration of residence after operation.								Result.				Remarks.
Yrs.	Wks.	Mts.	Mts.	Mts.	Mts.	Mts.	Above	C.	R.	U.	D.	
10	2-4	1-2	2-4	4-6	6-9	9-12	a year.					
..	1	...	...	...	...	...	...	1	...	...	...	Fistula in pernico.
..	1	...	...	...	...	...	...	...	1	...	...	Retention.
..	3	1	...	...	...	...	...	4	...	...	...	Excision.
..	...	1	...	...	...	...	...	1	...	...	...
..	...	1	...	...	...	...	...	1	...	...	...	Sarcoma of testis.
1	...	1	...	...	...	...	...	2	...	...	...
1	1	...	...	...	...	...	...	1	1	...	...
..	1	1	...	...	...	...	...	...	2	...	...	1 subsequent excision of humerus.
..	...	...	...	...	...	...	...	1	...	...	...
..	...	1	...	...	...	...	...	1	...	...	...
..	...	3	1	...	1	...	...	2	3	...	...	1 necrosis of stump.
..	1	3	5	2	...	...	...	8	2	...	1	1 whole of shaft removed.
..	...	...	1	2	...	...	...	2	1	...	...	1 subsequent excision.
..	...	1	...	...	...	...	...	...	1	...	...
2	...	1	...	...	...	...	...	3	...	...	...
..	...	1	1	...	...	...	...	1	1	...	...	1 subsequent excision.
1	...	...	...	...	...	...	...	1	...	...	...
..	1	...	...	...	...	...	...	1	...	...	...	Of trochanter major.
..	...	1	...	...	...	...	...	1	...	...	...
..	...	...	1	...	...	...	...	1	...	...	...
..	...	1	...	...	...	...	...	1	...	...	...
..	...	...	...	1	...	...	...	...	1	...	...	Sarcoma of jaw.
..	...	1	...	1	...	...	...	1	...	...	1	Died of pneumonia.
..	1	...	...	...	...	...	...	1	...	...	...	Head of bone removed for dislocation.
..	...	2	1	1	...	...	...	4	...	...	...	3 disease, 1 injury.
..	...	...	6	4	4	2	...	9	5	...	3	1 died of tubercular meningitis, 1 of hæmorrhage, 1 of collapse.
..	...	1	3	4	...	1	...	9	...	...	1	1 partial excision. Death: hæmorrhage.
..	...	1	...	1	...	...	...	2	...	...	...	1 necrosis, 1 caries.
..	2	...	...	...	...	...	...	...	2	...	...	Caries.
..	...	1	...	...	...	...	...	...	...	...	1	Contraction of knee, amyloid disease.
1	6	5	...	...	...	...	...	8	4	...	...	Of tendo-Achillis 5, of tibial tendons 3, of peronei 3, of plantar fascia 1.
..	...	1	1	...	...	...	...	1	1	...	...
..	1	...	...	...	...	...	...	1	...	...	...	For deformity after fracture.
..	...	10	15	3	...	...	...	28	...	...	...	2 deformity after excision, 24 genu valgum, 1 genu varum, 1 deformity of knee.
..	...	2	4	3	...	...	...	6	3	...	...	For curved rachitic tibiæ and malposition after fracture.

TABLE III—

SURGICAL OPERATIONS.	Sex.		Ages.						
	M.	F.	Under 5	5-10	-20	-30	-40	-50	-60
<i>LOCOMOTORY SYSTEM—continued.</i>									
Incisions (major)	12	6	1	11	3	1	1	1	...
Forcible movement of joints . . . . .	...	2	...	...	1	1	...	...	...
Forcible straightening of flexor tendons . . . . .	...	1	...	...	...	...	1	...	...
Scraping interior of knee-joint	1	...	1	...	...	...	...	...	...
Removal of loose cartilage from knee	1	...	...	...	1	...	...	...	...
„ foreign body from wrist, foot, &c.	1	1	1	...	...	1	...	...	...
Aspiration	3	...	...	1	1	1	...	...	...
Ununited fracture of forearm	1	...	...	...	1	...	...	...	...
„ „ tibia	1	...	1	...	...	...	...	...	...
Ganglion of wrist (compound)	1	...	...	...	...	...	...	...	...
Ligature of radial artery	1	4	...	1	1	2	1	...	...
Reduction of dislocation—									
Of humerus . . . . .	...	1	...	...	...	...	...	1	...
Of forearm . . . . .	...	2	...	...	1	1	...	...	...
Of astragalus	2	...	...	...	...	...	...	...	1
Of foot	1	...	...	...	...	...	...	1	...
Refracture of forearm	1	...	...	...	1	...	...	...	...
<i>Primary amputation.</i>									
Of upper arm	2	2	...	...	2	1	...	...	...
Of forearm	1	1	...	...	...	1	...	1	...
Of finger	9	...	1	1	4	2	...	...	1
Of thigh	4	2	1	1	...	2	1	...	...
Of leg	9	1	...	...	4	...	4	1	...
Of foot	2	...	...	...	1	1	...	...	...
Of toe	2	1	...	...	...	2	...	...	1
<i>Secondary amputation.</i>									
Of upper arm	1	...	...	...	...	...	1	...	...
Of finger	1	...	...	1	...	...	...	...	...
Of leg	1	...	...	...	1	...	...	...	...
Of foot	1	...	...	...	1	...	...	...	...
Of thigh	1	1	...	...	...	1	...	...	...
<i>Amputation for disease.</i>									
Of upper arm	2	...	1	...	...	...	1	...	...
Of fingers	2	5	1	...	2	1	1	1	1
Of thigh	5	2	...	2	...	2	2	...	1
Of leg	2	1	...	...	...	1	...	1	1
Of foot	2	2	1	2	...	...	1	...	...
Of toe	1	2	...	...	2	1	...	...	...

continued.

Duration of residence after operation.								Result.				Remarks.
Days. -10	Wks. 2-4	Mts. 1-2	Mts. 2-4	Mts. 4-6	Mts. 6-9	Mts. 9-12	Above a year.	C.	R.	U.	D.	
...	5	4	5	4	...	...	...	15	3	...	...	Periostitis of femur, dislocation of shoulder and knee, lumbar abscess, calf, &c.
1	1	...	...	...	...	...	...	...	2	...	...	Anchylosis of knee and shoulder.
...	...	1	...	...	...	...	...	1	...	...	...	Of hand.
...	...	1	...	...	...	...	...	...	1	...	...	Disease of knee.
...	1	...	...	...	...	...	...	1	...	...	...	? Cyst of synovial membrane.
...	1	...	...	...	...	...	...	2	...	...	...	Point of bradawl from wrist, needle from foot.
...	1	1	1	...	...	...	...	3	...	...	...	Gluteal, lumbar abscess, &c.
...	...	...	1	...	...	...	...	...	1	...	...	Resection.
...	...	1	...	...	...	...	...	1	...	...	...	Seton introduced.
...	1	...	...	...	...	...	...	1	...	...	...	Opened freely antiseptically.
2	1	1	...	...	...	...	...	5	...	...	...
...	1	...	...	...	...	...	...	1	...	...	...
...	1	...	...	...	...	...	...	1	1	...	...
1	1	...	...	...	...	...	...	2	...	...	...	1 with fracture of astragalus.
...	1	...	...	...	...	...	...	1	...	...	...	With fracture of astragalus.
...	...	1	...	...	...	...	...	1	...	...	...	Vicious union.
...	2	1	...	...	...	...	...	3	...	...	1	2 laceration, 2 compound comminuted fracture.
...	2	...	...	...	...	...	...	2	...	...	...	Compound comminuted fracture.
4	3	...	...	...	...	...	...	9	...	...	...	3 lacerated, 6 fractured.
...	...	1	1	...	...	...	...	3	...	...	3	1 compound comminuted fracture, 1 simple of femur into joint, 3 smash of leg, 1 laceration of thigh.
1	2	5	...	2	...	...	...	8	...	...	2	2 laceration, 5 smash of leg, 2 smash of foot.
...	...	1	...	1	...	...	...	2	...	...	...	1 Hey's, 1 Syme's amputation.
...	...	3	...	...	...	...	...	3	...	...	...	Smash.
...	...	1	...	...	...	...	...	1	...	...	...	18 days after lacerated wound.
...	...	...	...	1	...	...	...	1	...	...	...	5 days after lacerated wound.
...	...	1	...	...	...	...	...	...	...	...	1	Septicæmia, empyæma.
...	...	...	...	1	...	...	...	1	...	...	...	Syme's amputation 4 months after primary amputation of foot.
...	...	...	1	...	...	...	...	1	...	...	1	9 days after primary amputation of foot, 1 for gangrene.
...	...	2	...	...	...	...	...	2	...	...	...	Disease of elbow, 1 reamputation for conical stump.
2	3	...	...	...	...	...	...	7	...	...	...	1 supernumary thumb, 2 cellulitis, 2 caries, 1 necrosis.
...	1	6	...	...	...	...	...	7	...	...	...	1 sarcoma of fibula, 2 of femur, 1 necrosis of femur, 3 dislocation of knee.
...	...	3	...	...	...	...	...	3	...	...	...	1 infantile paralysis, 2 sloughing.
...	2	1	...	1	...	...	...	4	...	...	...	Disease of tarsus and ankle, talipes.
...	...	3	...	...	...	...	...	3	...	...	...	2 "hammer toe," 1 caries.

continued.

Duration of residence after operation.								Result.				Remarks.
Dys. -10	Wks 2-4	Mts. 1-2	Mts. 2-4	Mts. 4-6	Mts. 6-9	Mts. 9-12	Above a year.	C.	R.	U.	D.	
...	1	3	...	...	...	...	...	2	2	...	...	1 restoration of lower lid, 3 deformity of nose following lupus.
...	...	1	...	...	...	...	...	...	1	...	...	After burn.
...	3	5	2	...	...	...	...	8	3	...	...
3	3	1	...	...	...	...	...	13	...	...	1	In 1 snout merely removed.
...	...	3	2	...	...	...	...	1	4	...	...
...	...	3	...	...	...	...	...	3	...	...	2	4 comminuted fracture of vault, 1 wound by bullet.
2	1	...	...	...	...	...	...	3	...	...	...	Wound of eye.
...	1	...	...	...	...	...	...	1	...	...	...
...	1	...	...	...	...	...	...	1	...	...	...
...	...	...	...	...	...	...	...	1	...	...	...
								462	71	...	56	
								589				

SUMMARY OF DISEASES.

GENERAL DISEASES.

Erysipelas (arising).—C. 32, R. 5, D. 1. Arising in the surgical wards of the hospital 38 cases; males 24, females 14; mostly following operation. Average duration of erysipelas 13 days. Death due to exhaustion following severe erysipelas of trunk after general contusions.

Erysipelas (admitted as such).—C. 49, R. 2, D. 6. 57 cases; of these 18 of scalp and face; 16 of upper extremity; 23 of lower extremity; 2 vaccino-erysipelas.

Pyæmia (arising).—No case of pyæmia arose in the wards during the year.

Pyæmia (admitted as such).—D. 1. Male. Admitted with erysipelas of leg, disorganisation of ankle-joint; acute blood poisoning. Died on third day. P.M.—In upper part of left lung two or three small wedge-shaped patches of consolidation containing semi-purulent matter. Suppuration in ankle and both knees.

Syphilis—

1. *Primary* by—

a. Indurated or primary chancre.—Males 2, females 18. C. 18, R. 1, U. 1. Females admitted chiefly for primary sore; most with some venereal complication; 6 with marked induration; 11 with inguinal adenopathy.

2. *Secondary* by—

a. Condylomata.—Males 2, females 36. C. 32, R. 5, U. 1. Associated with vaginal discharge in 12, sores in 6, sore throat 7, warts 3, psoriasis 4, eczema 1, buboes 2.

b. Eruptions.—Male 4, female 38. C. 34, R. 8. Psoriasis 26; roseola 7; rupia 6; eczema 6; lichen 2; with sore 4; warts 2; vaginal discharge 11.

c. Ulceration of tongue. Female 1. C. 1. With sore, rupia, inguinal glandular enlargement, and vaginal discharge.

d. Ulceration of throat.—Female 1. C. 1. Also of upper lip eight months after primary sore; psoriasis, prurigo.

e. Ulceration of cornea.—Female 1. C. 1. With iritis and conjunctivitis.

LOCAL DISEASES.

TUMOURS.

*Carcinomata.**Scirrhus of—*

a. Breast.—Females 22. C. 15, R. 1, U. 4, D. 2. 4 too far advanced for operation; in 8 cervical or axillary glandular infiltration; amputation (partial or complete) in 17. Deaths—acute septicæmia with fibroid phthisis; large, flabby, fatty heart, weighing 1 lb. 2 oz.

b. Breast (recurrent).—C. 1, U. 1. Primary amputation 8 months previous to admission and 13 months; recurrence 6 and 5 months. Operation in 1.

c. Glands.—C. 3, U. 1, D. 1. 4 axillary; 1 submaxillary; 3 primary; 2 secondary. In 2 mamma amputated 6 months before admission; in 3 removal of glands.

d. Rectum.—Male 4, female 2. R. 1, U. 2, D. 3. In 2 nature of tumour uncertain; 1 left, 1 right lumbar colotomy; 1 abdominal section without opening colon; 1 division of stricture; 1 refused colotomy.

Encephaloid of—

Bladder.—Male 1. D. 1. Cystitis and hæmorrhage from bladder. Tumour readily felt per rectum. P.M.—Medullary cancer of bladder; granular contracted kidneys.

Colloid of—

Rectum.—Female 1. D. 1. Large gluteal and ischio-rectal abscess; loss of power over sphincter. P.M.—Colloid cancer of rectum and pelvis, originating on the left and anterior sides of rectum, extending through sciatic notches to nates. Thrombosis of veins of lower extremities. No infiltration of glands of pelvis or abdomen.

Epithelioma of—

a. Tongue.—Males 12, female 1. C. 8, R. 1, U. 1, D. 3. 6 with glandular infiltration; excision in 8; 1 complicated with erysipelas; 1 with pleurisy; 1 hæmorrhage after digital examination; ligature of common carotid above omo-hyoid; asthenia; death; 1 died after Langenbeck's operation. P.M.—Cirrhosis of liver; granular contracted kidneys.

b. Hip.—Males 7. C. 4, R. 1, U. 2. 5 cases operated upon. In 5 submaxillary glandular enlargement; 1 followed by erysipelas.

c. Mouth.—Males 2. U. 1, D. 1. Both too extensive for operation. P.M.—Glands enlarged with new growth. Tumour involving larger portion of inferior maxillary bone, extending into neck. Tongue also partially involved. No affection of œsophagus or larynx.

d. Vulva and penis.—Male 1, females 3. C. 2, R. 1, U. 1. 2 excision of growth from vulva; 1 amputation of penis; 1 uterus involved and fixed; in 1 glandular enlargement, and too far advanced for operating upon.

e. Scrotum.—C. 1. Recurrent epithelioma of perineum in connection with

wound of old operation for stricture (perineal section). Removal of mass with knife.

f. Anus and rectum.—Males 3, female 1. C. 1, R. 1, U. 1, D. 1. 1 with fistula; 1 with hæmorrhoids; 2 growth removed by incision; rest relieved with suppositories. P.M.—Death from ether inhalation, general pleuritic adhesions, œdema of right lung, ? epithelioma, or scirrhous of rectum.

g. Lower extremity.—Males 2. C. 1, D. 1. 1 infiltration of scar of burn operated upon three times; 1 epithelioma of ulcers of legs. P.M.—Bronchitis; cardiac disease.

h and j. Inguinal and submaxillary glands.—Males 5. R. 4, U. 1. All secondary; 3 following removal of tongue; 2 of penis; 1 operation, inguinal.

Sarcomata.

1. *Spindle-celled*—

a. Upper jaw.—C. 2, R. 1, U. 2. 4 too extensive for operation; 1 recurrent; 1 involving zygomatic fossa; in 1 partial removal of palate; cavity of antrum exposed.

b. Lower jaw.—C. 1. Osteo-sarcomatous epulis removed with knife, chisel, and gouge.

c. Mamma.—C. 1. Suppurating signs of recurrence before discharged.

d. Scapula.—C. 2. Both recurrent after removal. 1 size of walnut over scapula; 1 $4 \times 3\frac{1}{2}$, loosely attached to dorsum scapulæ; 2 removed.

e. Thigh.—C. 2, U. 2. 1? sarcoma; 1 refused operation; amputation of thigh in 2; 1, æt. 6, circumference of knee $17\frac{1}{4}$.

f. Leg.—C. 1. Removed with greater part of fibula; recurrence 6 weeks after; again removed; in 5 days secondary hæmorrhage and amputation of thigh.

g. Multiple.—D. 2. Duration 18 months and 2 years. In both cases general disseminated masses of new growth.

2. *Round-celled*—

a. Upper jaw.—U. 1. Ulcerating round-celled sarcoma of left cheek; palate and nares involved. No relief from chian turpentine.

b. Mamma.—C. 1, U. 1. 1 in child of three months old; brawny tense growth, $3\frac{1}{2} \times 3\frac{1}{2}$, not suitable for operation; 1 removed.

c. Parotid.—C. 2. 1 recurrent. Both removed with knife without much hæmorrhage.

d. Groin.—C. 1. Hard movable swelling below Poupart's ligament suggesting omental hernia; lumbar glandular enlargement; one third of tumour melanotic.

e. Face.—C. 1, U. 2, D. 1. 1 melanotic of lower eyelid removed with scissors;

1 electrolysis employed with effect; 2, same patient, recurrent extensive round-celled. P.M.—Blocking by new growth of left internal jugular vein, innominate and superior cava, also projecting freely into right auricle; slight œdema of upper extremities.

f. Leg.—C. 1. Removed with knife (subsequent recurrence).

g. Testis.—C. 1. 5 years' duration; rapid increase 3 months. Cystic with sarcomatous growth from interior.

3. *Myeloid.*—R. 1. Right half of lower jaw removed before admission; operated upon three times; left half removed.

Cystic—

Ovary.—C. 11, R. 4, U. 4, D. 4.

Cases in which ovariectomy was performed 15. C. 11, R. 1, D. 3.

CASE 1.—E. H., æt. 18, single. *Double* ovarian disease. Previous paracentesis; fluid highly albuminous. Tumour movable, and at first thought to be connected with omentum. Chiefly unilocular of left side; long pedicle; no adhesions; commencing suppuration in interior. Cyst of right side (3 chief cysts), lying in right iliac fossa, contained traces of teeth and hair. Healed by first intention. Cured.

CASE 2.—E. D., æt. 24, married. Suckling child of 4 months old. Tumour noticed 2 months after confinement. Catamenia always regular. Paracentesis; 11 pints of fluid. Cyst multilocular; right ovary. One large cyst contained thin fluid, another more solid and cheesy. Pedicle $2\frac{1}{2}$ inches broad, tied with silk. Cured.

CASE 3.—F. S., æt. 30, single. Duration 2 years. Amenorrhœa 6 months. Fluid gelatinous; a good deal of solid material in cyst. Multilocular; right ovary. Pedicle tied and returned. Cured.

CASE 4.—A. B., æt. 31, married. *Double* ovarian disease. Duration 4 years. Catamenia regular. Larger cyst on right side, and chiefly unilocular; left 2 cysts. Pedicles ligatured. Cured.

CASE 5.—E. W., æt. 37, married. Duration 1 year. Catamenia regular till 6 months before admission; sanguineous discharge since. Cyst adherent to liver, omentum, and transverse colon. Some ascitic fluid. Right ovary. 14 ligatures. Highest temperature $99\cdot6^{\circ}$. Cured.

CASE 6.—H. O., æt. 39, married. Duration $1\frac{1}{2}$ year. Noticed after confinement. Catamenia regular. Right ovary. Scarcely any adhesions. Cured.

CASE 7.—S. J., æt. 40. Duration 6 months. Menorrhagia. Dark straw-coloured fluid. Right ovary. Cyst the size of a man's fist on left side. Cured.

CASE 8.—J. A., æt. 44. Duration 10 months. No adhesions; multilocular right ovary. Temp. never above $100\cdot8^{\circ}$. Discharged cured 5 weeks after operation.

CASE 9.—M. A. H., æt. 59, married. Duration 13 months; previous paracentesis. Operation uncomplicated, slightly adherent to walls. Discharged in one month. Cured.

CASE 10.—M. W., æt. 47, single. Duration? $2\frac{1}{2}$ years. Paracentesis 2 years ago. Fluid clear, almost like water, containing excess of chlorides. Left ovary involved; no adhesions. Discharged in 36 days. Cured.

CASE 11.—S. C., æt. 60, married. Duration 11 months. Cyst rotten, burst, and fluid escaped into peritoneal cavity. Adhesions. Cyst multilocular and contained gelatinous material. Cured.

CASE 12.—M. A. R., æt. 69. Duration 1 year. Operation abandoned on

account of adhesions; cyst stitched to abdominal wound; 16 pints fluid removed. Incomplete ovariectomy. Relieved.

CASE 13.—H. D., æt. 49, single. Duration 5 months; no catamenia since first appearance. Broad ligament cyst; a quantity of solid material. Multilocular. Right ovary. Pedicle short, 5 ligatures placed upon it. Only slight adhesions anteriorly and in the pelvis. Died 7 days after operation from acute peritonitis.

CASE 14.—F. F., æt. 47, widow. Duration 4 months. Cyst multilocular, burst in peritoneal cavity. Left ovary. Died 7 days after operation from pneumonia.

CASE 15.—R. W., æt. 58, married. Duration 10 years. A great number of adhesions around cyst. Died 2 days after operation from exhaustion.

Fibroid disease of uterus.—C. 1, D. 1. Abdominal section in both.

CASE 1.—S. H., æt. 51, married. Constant purulent or sanguineous discharge. Uterus measures $5\frac{1}{2}$ inches vertically. Uterus removed with fibroid tumour under antiseptic precautions. Tumour transfixed with needle $1\frac{1}{2}$ inch above os uteri, and thread tied on either side. Discharged in less than a month after operation.

CASE 2.—M. A. W., æt. 48, widow. Tumour $4\frac{1}{2}$ years. Catamenia regular. Removal of portion of uterus and Fallopian tubes. Little if any peritonitis. Died 5 days after operation from hæmorrhage into abdominal cavity.

NERVOUS SYSTEM.

Tetanus (arising).—D. 1. Recurrent tumour of leg (sarcoma); ulcerating. Three weeks after admission complained of stiffness of neck followed by all the symptoms of tetanus. Much improvement under chloral, but died suddenly during a spasm on 11th day of tetanus.

Tetanus (admitted with).—C. 2, D. 2. 1 patient admitted with trismus of 2 days' duration following lacerated wound of thumb, which lasted but 4 days. 1 lacerated wound of pinna 9 days before admission. Trismus 6 days. Chloral hydrate, ʒj, 4tis horis. Went out in a month. Cured. 1 wound of foot 6 days. Tetanus 16 hours. Inhalation of chloroform. Tracheotomy. Died during severe spasm. 1 wound of foot with pickaxe. Wound healed. Tracheotomy. Chloroform. Died on 2nd day after admission.

CIRCULATORY SYSTEM.

Aneurism.—C. 2, R. 1. 1. Male, æt. 39, messenger. Popliteal aneurism 6 months. Subject to rheumatism and gout. Never syphilis. Digital compression employed under the influence of morphia on and off for six days. Leg then flexed, elevated, and bandaged. A fortnight after ligature of femoral at apex of Scarpa's triangle. Cured.

2. Male, æt. 39, tailor. Popliteal aneurism 6 months. Said to be abstemious, and no history of syphilis. Ligature of femoral at Scarpa's triangle.

3. Male, æt. 39. Aneurism of innominate artery. Probable duration 2 years. Syphilis 18 years ago. Pulsating swelling which pushed right sterno-clavicular articulation forward, subsided somewhat under iodide of potassium. Relieved.

DIGESTIVE SYSTEM.

Hernia.—(See Special Table, Hernia.)

Fistula in ano.—C. 20. All but two operated upon. 2 double fistulæ; 1 had also perineal fistula with stricture; 1 had hæmorrhoids; 4 with family history of phthisis; 3 with personal history of same.

Hæmorrhoids.—C. 10, R. 1. 5 internal, 3 external, 3 internal and external; 4 with hæmorrhage.

Stricture of rectum.—R. 2. Females. Syphilitic. About 2 years' duration. 1 $3\frac{1}{2}$ inches from verge of anus much relieved by division with knife under ether and dilatation with bougies smeared with Ung. Hyd. 1 dilated with bougies. Pot. iod. given. Much relieved.

Intussusception.—Males 2. D. 2. In both abdominal section. Both aged 3 months. In 1 abdominal pain 3 days. Blood and mucus from bowel before admission. Obstruction 3 days with vomiting. Incision in median line to relieve invagination which was found, but not returned; afterwards insufflation and copious injections. Died 3 hours after. P.M.—Small intestine found stitched to wound forming artificial anus. Small intestine invaginated into transverse colon near splenic flexure, in fact, extending down descending colon to neighbourhood of anus. Gut even post-mortem was quite irreducible, and intussusception found to commence at ileo-cæcal valve. No peritonitis.

1 with umbilical hernia and intussusception; protrusion of vitelline duct. Abdominal section not followed by relief. P.M.—The condition of things very curious. (1.) A solid-looking fleshy mass covered with membrane, looking like mucus membrane, projected from gut to the size of a bean. This was attached at right angles to the bowel by a short pedicle. (2.) The pedicle joined a piece of bowel about $1\frac{1}{2}$ inches long, at each end of which was an orifice with thickened edges, just like the ends with intussuscepted gut. The membrane covering this $1\frac{1}{2}$ inches of bowel looked like mucous membrane. (3.) Behind a loop of intestine passed into this portion, and was evidently intussuscepted. Recent acute peritonitis.

Obstruction of bowels.—Male, æt. 60, shoemaker. Frequent and prolonged attacks of constipation, causing much trouble ten months before admission, with retching, constipation, pains, and flatulence. Fæcal vomiting and mucosanguineous discharge from rectum. Bowels acted slightly after enemata. Condition on admission:—Emaciation, constipation, pain, tympanites. Relieved temporarily by enemata and Ol. Ricini. Right lumbar colotomy. Cured.

GENITO-URINARY SYSTEM.

Hydrocele.—C. 4, D. 1. 4 tapped previously. In 2 iodine injected; 1 followed by much inflammatory thickening; 1 very large hydrocele tapped; $1\frac{1}{2}$ gallons fluid evacuated, then freely opened under antiseptic spray; tunica vaginalis and testis removed; pericarditis, endocarditis, pleurisy. Death. 1 double hydrocele; sacs opened; tunica vaginalis sutured with carbolic to opposed skin; 1 hydrocele of cord with undescended testis.

Hæmatocele.—C. 1. Before admission tapped 4 times in 6 months. No relief from ice and suspensory. Slit up and tunica vaginalis sewed to skin.

Cystitis.—C. 7, R. 1. 5 cases of vesical catarrh, chiefly due to morbid products in urine. 1 acute; 1 subacute; 1 tubercular; 2 due to calculus; 2 with hæmaturia.

Calculus vesicæ.—Males 11, female 1. C. 9, R. 2, D. 1. 1 female, ? calculus. 2 males, ? calculus. Lateral lithotomy in 6 males. 1 stone size of flattened pigeon's egg; 1 size of marble. Calculi the following dimensions:— $1\frac{1}{2} \times 1\frac{1}{4} \times \frac{3}{8}$ in.; $1\frac{3}{4} \times 1\frac{1}{4}$; $1 \times \frac{3}{8}$; $2\frac{1}{4} \times 1\frac{1}{2} \times 1$. Stricture of urethra in 2 cases; cystitis in 2; enlarged prostate in 1; prolapsus ani and phimosis 1; 5 uric acid and phosphates; 1 uric acid and oxalates; lithotripsy in 2 males; 1 had 4 calculi, 1 of which was crushed, 3 removed by Bigelow's apparatus; 1 case of lithotripsy, oxalate of lime and uric acid, 4 previous sittings; fragment removed with Clover's injector.

Calculus of urethra.—C. 3. All simple extraction. 1 previous passage of calculus size of cherry-stone; 3 removed from one patient. In 2 meatus had to be slit up; 3 cases of phosphates; 1 urate of ammonia.

Stricture of urethra.—C. 25, R. 4, D. 3. *Causes*.—Traumatic 3; following gonorrhœa 18. *Complications*.—3 retention of urine; 1 each cystitis, anal fistula, rigors, phimosis; 2 perineal fistula. *Treatment*.—Continuous dilatation 8; gradual 12; perineal section 2; internal urethrotomy 8; Holt's dilatation 1; cystotomy 1. *Fatal cases*.—1, æt. 73, double stricture, dysuria. No catheter passed. Perineal puncture. Wound of bulb followed by venous hæmorrhage. Cystitis; exhaustion. P.M.—Prostatic abscess; chronic bronchitis; cirrhosis of kidneys; cystitis. 1, æt. 45, traumatic stricture; suppression; uræmia. P.M.—Granular contracted kidney; cystitis; no pyelitis. 1, æt. 74, fœtid urine dribbling from urethra; cystitis. P.M.—Bronchitis.

Retention.—C. 16, R. 2, D. 2. 4 with enlarged prostate, the rest with stricture; 1 with gonorrhœa; 1 with perineal abscess and extravasation. *Treatment*.—Perineal section 4; bath 4; catheter 10; aspiration of bladder above pubes 1; tapping of rectum 1. *Fatal cases*.—1, æt. 33, admitted for retention with stricture. Catheters passed. P.M.—Cystitis; suppurative nephritis; pyelitis; surgical kidney; phthisis. 1, æt. 70, retention with enlarged prostate; rigors; prostatic abscess. P.M.—Cystitis.

Extravasation of urine.—C. 1, D. 2. 1 admitted with impacted urethral calculi; stone came away, and 4 days after extravasation of urine appeared; incisions; slight tetany; circumcision. 1 with scrotum the size of a large

cocoa-nut, brawny, with several sinuses, discharging pus. Perineal section. Incisions into scrotum; large quantity of pus evacuated; uræmia. P.M.—Stricture of urethra, cystitis, atrophy, and inflammation of kidneys. 1 self-made false passage; extravasation into perineum; suppression of urine; delirium; uræmia. P.M.—Pleuritis; peritonitis.

Urinary fistula.—C. 9, D. 1. All with stricture; all perineal; 1 also scrotal; 3 multiple fistulæ; 5 treated by catheter; 3 perineal section; 1 Holt's dilator; 1 thermo-cautère; 1 followed by erysipelas. *Fatal case.*—Deformity of scrotum. Fistulæ, 1 above pubes and others of scrotum; inflammatory induration of perineum; perineal section; suppression of urine; uræmia; diarrhœa. P.M.—Pelvic and perineal cellulitis; acute peritonitis; cystitis.

Gonorrhœa.—C. 37, R. 2. *Complications, &c.*—Sores (soft and hard) 8; warts 4; condylomata 1; bubo 1; excoriations 5; psoriasis and other eruptions 6; œdema of vulva 1; fistula 2; hæmorrhoids 1.

DISEASES OF LOCOMOTORY SYSTEM.

Periostitis and otitis.—C. 12, R. 5.

Necrosis and caries.—C. 35, R. 20. No cases of special interest.

Fatal case.—Male, æt. 20. Chronic inflammation leading to necrosis of tibia 4 years. Pieces of bone have come away on different occasions. On admission several sinuses discharging over skin; sequestrotomy, followed in 3 weeks by diarrhœa, vomiting, and exhaustion. P.M.—Large amyloid liver encroaching on thoracic cavity; spleen waxy and received into a hollow of left lobe of liver; kidneys and intestines likewise amyloid.

Of shoulder.—C. 2, R. 3, D. 1. 4 cases of atrophy of shoulder muscles; 1 with severe and persistent neuralgia; 1 subarticular caries of head of humerus in which excision was performed; 2 ankylosis; in 1 forcible movement under chloroform employed.

Fatal case.—Female, æt. 25. Disease following injury of shoulder of 12 months' duration. Partial excision 9 months before admission. Excision of bone completed. Double pneumonia; temp. 105° before death.

Of elbow.—C. 9, R. 6. 1 following fracture; 1 dislocation; 5 synovial; 3 suppurative synovial; 2 ankylosis; 1 caries; 2 necrosis. In 3 excision; 1 amputation of upper arm; 1 sequestrotomy, the sequestrum being at junction of epiphysis and shaft.

Of hip.—C. 27, R. 26, U. 1, D. 7. Incipient 26; chronic 30; old excision readmitted 4; chronic osteo-arthritis 1; ankylosis 1; excision of hip 17, 1 of which was double; abscess of hip or thigh 14; iliac 3; in 2 disease double; with disease of ilium 2; pathological dislocation 2; followed by erysipelas 4; 1 disease localised between upper epiphysis and diaphysis; 1 with necrosis of femur.

Fatal cases.—Male, æt. 9. Disease 1 year; also of pelvis; excision; anti-

septic acetabulum extensively diseased; acute nephritis; suppression; albuminuria; delirium. No post-mortem.

Male, æt. 14. Duration 6 months. Struma; abscess of thigh; diarrhœa; delirium; tubercular meningitis. No post-mortem.

Female, æt. 3. Disease of both hips 5 months. Abscess of hip; antiseptics; carbolic poisoning. Death after exhaustion and great wasting. P.M.—Tubercular disease of lungs.

Male, æt. 9. Disease 10 months. Abscess of thigh; aspiration. P.M.—Pulmonary phthisis.

Female, æt. 10. Incipient disease 3 weeks. Acute necrosis of epiphysis; excision; hæmorrhage. P.M.—Iliac abscess; disease of mitral valve.

Male, æt. 8. Duration 8 months. Iliac abscess opened; excision; caries of head; sequestrum of acetabulum; collapse.

Male, æt. 7. Disease of hip and ilium 6 months. Sinuses opened up; no bone removed. P.M.—Phthisis; amyloid disease of intestines.

Of knee.—C. 46, R. 25, D. 2. Incipient 33; chronic 41; old excision readmitted 1; chronic osteo-arthritis 5; ankylosis 2; loose cartilage 1; excision of knee 10, 1 of which proved fatal; amputation of thigh 3; subcutaneous division tibia 1; simple synovial disease 17; suppurative synovial 11; disease of joint surfaces with abscess 6; double syphilitic disease 1; with displacement backwards and outwards of tibia 4; gonorrhœal rheumatism 2; hydrops articuli 2; congenital dislocation of hip 1; with lengthening of femur 1; followed by erysipelas 1.

Fatal cases.—Female, æt. 28. Disease of knee 4 years. Fixation of knee; nocturnal pain; excision; hæmorrhage; collapse; transfusion. P.M.—Organs healthy.

Male, æt. 2. Abscess of knee opened under antiseptic spray 1 day before admission. Vomiting and black urine. Died of collapse and carbolic poisoning.

Of ankle.—C. 5, R. 2. Gonorrhœal arthritis 1; simple synovial 2; suppurative 3; in 1 Syme's amputation.

Genu valgum.—C. 17, R. 9, U. 2. Subcutaneous osteotomy in 16; genu valgum duplex 14; well-marked rickets 15; with genu varum on opposite side 2.

SUMMARY OF INJURIES.

GENERAL INJURIES.

Burns.—Males 14, females 19. C. 19, D. 14. Of face and head 8; of chest 6; of back 2; of abdomen 2; of upper extremity 9; of lower extremity 2; general 5. *Complications.*—1 with pneumonia and bronchitis; 1 erysipelas; 1 delirium tremens. *Treatment.*—Carron oil 18; carbolic oil 3; olive oil 2; acetic acid and whiting 6; vaseline and salicylic acid 5; saturated solution of bicarbonate of soda 2. Most of the 2nd and 3rd degree; 2 of the 4th; 1 of the 5th.

Fatal cases.—Collapse 11; exhaustion 2; delirium?; meningitis 1.

Scalds.—Males 12, females 11. C. 18, R. 1, D. 4. Of head and neck 4; of chest 6; of back 2; of abdomen 2; of throat 2; upper extremity 2; lower extremity 2. *Treatment.*—Carron oil 10; acetic acid and whiting 3; bicarbonate of soda 2; carbolic, olive oil, cotton wool, each 2.

Fatal cases.—3 collapse; 1 suppuration and exhaustion.

LOCAL INJURIES.

HEAD.

Scalp wound.—Males 47, females 13. C. 59, D. 1. *Complications.*—Bleeding from ear 2; concussion 12; hæmorrhage 3; erysipelas 3; delirium tremens, hæmatoma, contusion of wrist and shoulder, of each 1. Extensive wounds with stripping of periosteum 3, treated with success antiseptically.

Fatal case.—Male, æt. 52. Fell 40 ft. from scaffolding; insensible on admission; right pupil dilated; bleeding from right ear; paralysis right facial; breathing stertorous; Collis fracture. Lived 36 hours. P.M.—Laceration of brain, both temporo-sphenoidal lobes and corpus callosum; no hæmorrhage into ventricles; fracture of 6th and 7th left costal cartilages without displacement; hæmothorax.

Fracture of vault of skull.—Males 19, female 1. C. 15, U. 2, D. 3. Com-

pound fracture without depression, without head symptoms, 1; compound depressed 2; simple depressed 7, pressure of occipital followed by epileptiform seizures; fissure of frontal with lacerated wound of scalp 2.

Other cases.—Male, æt. 11. Fell from horse, and probably kicked by it. When admitted, insensible, much vomiting, collapse; consciousness returned soon after admission. Compound and depressed fracture of skull in occipitoparietal region, without injury to dura mater. *Trephine*; elevation of larger fragment not removed, a small, loose piece of bone from outer table taken away, and small fragments from inner table. Discharged 46th day, cured.

Male, æt. 13. Kicked by a horse in parieto-occipital region. No head symptoms. Depression $\frac{1}{2}$ in. deep over surface of 3 in. *Trephine* and elevation. Discharged 52nd day, cured.

Male, æt. 30. Large cog-wheel fell upon head. Compound comminuted fracture of left parieto-occipital region, depression $\frac{1}{4}$ in.; paralysis of right arm. *Trephine*; elevation of fragments; piece of bone larger than a shilling removed. Some brain matter escaped next day. Aphasia. This and paralysis improved before the patient was discharged on 53rd day, cured.

Male, æt. 34. Deal board fell upon head. Compound and comminuted depressed fracture of left side frontal bone, scalp wound extensive, no loss of consciousness; vomiting; no paralysis. *Trephine*; elevation of four or five depressed fragments. Discharged 69th day, cured.

The above operations antiseptic.

Fatal cases.—Male, æt. 25. Fell down fifty stone steps. Effusion beneath left side of scalp; right hemiplegia; contracted right pupil. *Trephine*; no extravasation of blood to be seen either external or beneath dura mater. P.M.—Extensive effusion of blood over whole of posterior surface of skull and left lateral region. Two fractures of skull, one along occipital bone vertically ceasing just at foramen magnum. The other divided left temporal bone in its squamous portion, parallel with and anterior to petrosal part. Clotted blood over left cerebral hemisphere; this continued about region of angular convolution, also both temporo-spheroidal and anterior lobes.

Male, æt. 56. Self-inflicted gun-shot wound over upper part of temporo-occipital region. *Trephine*; three fragments of bone removed; deep, scarcely stertorous respiration. Lived 3 days. P.M.—Laceration of parietal lobe just above fissure of Sylvius, entering through right ascending parietal convolution. Bullet found in right lateral ventricle.

Male, æt. 68. Fell from cab and struck head. Fracture of vault of skull. Died on 3rd day, comatose. Fracture of 6th and 7th left ribs. On admission semiconscious, irritable, unwilling to be moved; breathing stertorous and rattling. General convulsions, especially of right side of face. No. P.M.

Fracture of base of skull.—Males 16. C. 10, D. 6. 5 fracture; 4 bleeding from ear; 3 also from nostril; 1 with subconjunctival hæmorrhage and vomiting; 1 complicated with fracture of tibia.

Other cases.—Male, æt. 15. Knocked by horse and cart. Conscious on admission, vomiting. One hour after admission stertorous breathing lasting ten minutes, bleeding and watery fluid from left ear; no paralysis. Followed by abscess over mastoid process. Cured.

Male, æt. 27. Fall of 7 feet. Unconscious; bleeding from right ear; serous discharge from both; vomiting of blood; facial paralysis. Cured.

Male, æt. 29. Fall down flight of steps; found insensible in an area. Unconscious; twitchings; bleeding from left ear; no paralysis of limbs or face; left internal strabismus; pupils equal; diplopia. On 14th day aphasia and left facial paralysis, which existed on 36th day, when patient was discharged, cured.

Male, æt. 36. Thrown from horse. Insensible on admission; pupils equal; no paralysis; ? escape of brain matter from left auditory meatus. On 13th day right facial paralysis noticed. Cured.

Fatal cases.—Male, æt. 50. Thrown off cab. Insensible; right facial paralysis. Lived but a few hours. P.M.—Fracture of base of skull; cerebral hæmorrhage.

Male, æt. 54. Fall from ladder. Insensible; no paralysis; no external bleeding. Lived 10 hours. P.M.—Fracture comminuted into foramen magnum; contusion of cerebellum and left frontal lobe; effusion of blood over left hemisphere.

Male, æt. 18. Knocked down by cab. Unconscious; restless; vomiting; bleeding from left ear. P.M.—Separation of lamboidal suture; cracks extending forward from this for about 3 in., involving only inner table; laceration of left temporo-sphenoidal lobe.

Male, æt. 33. Fell 50 ft. from ladder. Unconscious; stertorous breathing; no paralysis; bleeding from right ear, nose, and mouth. P.M.—Comminuted fracture of sphenoid, traversing petrous bone; contusion of frontal lobes.

Male, æt. 36. Self-inflicted gun-shot wound of head. Lived 20 minutes. Bullet entered head above right tragus. P.M.—Course of bullet through external auditory meatus, striking temporo-sphenoidal lobe; found embedded in left parietal lobe, and flattened out into quite a thin plate.

Male, æt. 36. Fell while running. Unconscious; bleeding from left ear and nose; restless. P.M.—Effusion from middle meningeal artery; fracture of occipital, temporal, and sphenoid bones; contusion of right temporo-sphenoidal lobe.

Concussion.—Males 41, females 19. C. 57, R. 2, D. 1. *Complications.*—Bleeding from ear 6; from nares 2; facial paralysis 4; scalp wound 10; hæmatoma of scalp 4; of thigh 3; contusion of scalp 2; 1 followed by dementia; 1 pneumonia; 1 hyperæsthesia of spinal accessory; 1 erysipelas.

Fatal case.—Male, æt. 48. ? Nature of accident. Lived 5 hours; much swelling of left parieto-occipital region; unconscious; pupils equal, dilated; stertor; lividity. P.M.—Laceration of frontal and parietal lobes, corpus striatum and optic thalami; blood extravasation into lateral ventricles.

Injury to eyeball.—Males 4, female 1. C. 5. Primary extirpation of globe in 3, all due to direct blow; total loss of vision.

INJURIES OF CHEST, SPINE, AND PELVIS.

Fracture of ribs.—Males 22, females 5. C. 23, D. 4. Direct injury 10; indirect 6; comminuted 1; at junction of costal cartilage 3; 1 with depression

below rib. *Complications.*—Emphysema 4; hæmoptysis 3; hæmaturia 2; bronchitis 3; collapse 2; pleurisy 2; fracture of clavicle 1.

Fatal cases.—Female, æt. 17. Run over by a van. Peritonitis; collapse; bronchitis; pleurisy; fœtid pus evacuated from right loin. P.M.—Fracture of last rib; lumbar and iliac abscesses.

Male, æt. 40. Run over. Collapse; delirium. P.M.—Pleurisy; fracture of 7th and 8th ribs; rupture of diaphragm, liver, and right kidney.

Male, æt. 4. Run over. Hæmaturia; collapse. P.M.—Rupture of peritoneum, liver, and right kidney; fracture of 10th, 11th, and 12th ribs.

Male, æt. 28. Run over. Collapse; internal hæmorrhage. P.M.—Serous effusion into peritoneal cavity; rupture of liver; fracture of 9th, 10th, and 11th ribs; contusion of right forearm.

Fracture of spinal column.—Males 2, females 2. C. 2, D. 2. Female, æt. 18. Fell from fourth story of house. Prominence in dorso lumbar region about 5 × 5 (hæmatoma); hæmaturia; albuminuria; pains in lower extremities; no loss of motion or sensation; application of plaster-of-Paris splint enclosing whole trunk.

The above case readmitted for application of felt jacket.

Male, æt. 31. Fracture of lower cervical vertebræ whilst diving. Anæsthesia and paralysis of whole of lower part of body. No. P.M.

Male, æt. 20. Fell from scaffolding 35 ft. Anæsthesia below first rib; loss of motion and sensation of legs; retention of urine; sensation of “pins and needles” down thighs and legs; spinal irritation. P.M.—Fracture of 7th cervical vertebra; considerable hæmorrhage into the canal and outside the dura mater; pressure on cord.

Dislocation of spine.—Males 2. C. 2. Male, æt. 22. Fell down stairs, striking top of head. Partial paralysis of right leg and arm and partial anæsthesia; retention; deficient movement of chest walls; rotatory displacement of lower cervical vertebra. Plaster-of-Paris splint applied supporting head and extending down back.

Male, æt. 44. Truss of straw fell upon patient. Evident displacement of first dorsal vertebra. Discharged 7th day, cured.

Fracture of pelvis.—Cases discharged cured. Male, æt. 57. Fell from roof 25 ft., flat on back. Fracture of rib with emphysema; fracture of left side of pelvis.

Male, æt. 38. Run over. Fracture of ischium; hæmaturia.

Male, æt. 24. Brick wall fell 12 ft. upon patient. Fracture outside sacro-iliac synchondrosis, and extending to ramus of pubes; retention. Plaster-of-Paris jacket, including trunk and thighs.

Fatal cases.—Male, ? æt. 20. Nature of accident unknown. P.M.—Fracture of 6th, 7th, 8th, and 9th ribs, with laceration of visceral pleura; rupture of lung and kidney; hæmo-pneumothorax; fracture of iliac bone and sacrum.

Male, æt. 7. Run over by cart. Collapse; vomiting; restless. P.M.—Fracture right across pubic crest on left side, and separating left ilium from sacrum; much subperitoneal extravasated blood in pelvis; suddenly produced hernia of fundus of bladder.

INJURIES OF THE UPPER EXTREMITIES.

Wounds.—M. 23, F. 17, C. 40. 1 into elbow-joint; 1 caused by bradawl, which was found beneath flexor sublimi tendons at wrist; 2 by glass; 1 by needle; 1 by bullet; 1 snake-bite (English viper), with vomiting and much effusion; 1 complicated with fracture of ribs; 2 with hæmorrhage; amputation of arm 3; of fingers 3.

Fracture of humerus (simple and comminuted).—C. 13, R. 2. By direct violence 8; indirect 7; at upper third 5; middle third 4; lower third 6; of internal condyle 1; of external condyle 1; intracapsular 1; longitudinal into elbow 1; with synovitis of elbow, hæmatoma, wound of scalp, of each 1.

Fracture of humerus (compound).—C. 4. 1 at middle, 3 at lower end; 1 with crushing of ulnar nerve (failure of attempt at artificial union); 1 removal of internal condyle; 1 of external and capitellum; 1 excision and removal of fragments.

INJURIES OF THE LOWER EXTREMITIES.

Dislocation of femur.—M. 4, C. 1, U. 3. 1, æt. 10, single congenital dislocation on dorsum; 1, æt. 5, double congenital, with much lordosis; 1 æt. 23, dislocation on dorsum of 15 years' standing; $2\frac{1}{2}$ in. shortening; fair amount of flexion and extension; 1 recent, dorsal, produced by forcible abduction; reduction without anæsthetic.

Dislocation of patella.—C. 1, U. 1. In 1 direct violence to knee, admitted with traumatic synovitis, dislocation outward, reduction; in 1 history of obscure injury in infancy; outward; no treatment.

Dislocation of semilunar cartilage.—C. 2, R. 1. In 2 direct, in 1 indirect violence; 2 internal cartilage, 1 external.

Dislocation of foot.—C. 2. Both produced by twist of foot. 1 inwards, with ? fracture of astragalus; ether given; reduction of dislocation; plaster splint applied. 1 backwards, with fracture of both malleoli.

Dislocation of astragalus.—C. 1. Twisted foot; rotation of astragalus on antero-posterior axis outwards, and dislocation of bone outwards; head of bone detached from scaphoid and superior surface looks outwards; no fracture of external malleolus. Reduction under chloroform; plaster splint.

Fracture of femur (simple).—C. 34, R. 1, D. 2. Of shaft 30; extracapsular 4, of which 1 was long standing, and in another the opposite femur fractured 2 years previously; fragilitas ossium in 2, with delayed union; by indirect violence 20, by direct 17; into knee-joint 3; 1 with fracture of ilium and concussion; 1 with delirium tremens; 1 followed by necrosis of shaft at seat of fracture.

Fatal cases.—Male, æt. 8. Accident caused by traction engine. Fracture of

femur into knee-joint; laceration of thigh; collapse. Primary amputation of thigh at upper third. Lived 4 hours.

Male, æt. 76. Fell down flight of stairs. Fracture at junction of upper and middle thirds. Plaster splint applied. Bedsores. Lived 1 month. P.M.—Chronic gout and rheumatic arthritis; contracted kidney.

Compound fracture.—C. 1. Direct from kick of horse. Remained in hospital 15 months for delay in union.

Comminuted fracture.—C. 2, D. 1. All by direct violence to shaft, 2 at lower third, 1 middle. Delirium tremens. P.M.—Cirrhosis of kidneys and liver.

Compound and comminuted.—C. 1, D. 1. 1 at upper third, 1 at lower into knee-joint. Primary amputation in 1—death from collapse.

Fracture of patella.—C. 12. In 4 history of direct violence, the rest by muscular action, 1 vertical.

Fracture of tibia.—C. 22, R. 6, D. 1. Direct violence 6, indirect 20, spontaneous 1. At middle third 9, lower third 20, greenstick 1; 2 compound, 1 into ankle, 1 compound and comminuted, 1 ununited; 3 transverse of shaft.

Fatal case.—Male, æt. 42. Fell from a ladder. About two inches of bone was protruding, and a small loose fragment removed. Internal saphenous vein wounded, this divided and tied at both ends. Delirium; septicæmia; no rigor. P.M.—Suppuration of soft parts about fracture; femoral glands hyperæmic and enlarged. No evidence of pyæmia.

Fracture of fibula.—C. 38, R. 13. Those relieved only retained in hospital for a few days. All at lower fourth of shaft. By indirect violence (twist of foot, &c.), 47; by direct violence 4; 1 of 3 weeks' duration; 5 ? fracture; 2 with delirium tremens; 4 compound at lower third. Lateral or antero-posterior plaster of Paris splints in all cases.

Fracture of tibia and fibula.—C. 67, R. 3, D. 4. At upper third of shaft 5; at middle third 11; at lower third 58. By indirect violence 53; by direct violence 21; 1 second time of fracture; 2 followed by necrosis; 1 into knee-joint; 12 compound, 2 comminuted; 10 compound and comminuted, 1 case being of both legs.

Fatal cases.—Male, æt. 15. Compound fracture by indirect violence at junction of lower and middle thirds of both bones. Dressed antiseptically; sloughing and deep suppuration. Secondary amputation. Suppuration of knee-joint; rigors; septicæmia. P.M.—Emphyæma; incipient pneumonia, right base; small abscess over symphysis pubis.

Female, æt. 61. Smash of leg by tramcar. Lived 24 hours. Collapse; primary amputation above knee. P.M.—Granular contracted kidneys.

Male, æt. 20. Railway accident. Primary amputation below knee; secondary hæmorrhage; collapse.

Male, æt. 62. Run over by 'bus. Smashed leg, loose fragments removed. Delirium tremens; erysipelas of face. P.M.—Abscess, size of orange, right side of brain.

Fracture of bones of foot.—C. 10, D. 1. *Fatal case.*—Female, æt. 65. Run over by brougham; compound and comminuted fracture of foot, with laceration.

Primary amputation of leg at lower third; sloughing; hæmorrhage. Secondary amputation of thigh; extensive atheroma of vessels; sloughing of flaps. P.M.—Fracture of 2nd, 3rd, 4th, 5th, 6th, 7th ribs; 6th projecting into pleural cavity; acute pleurisy.

Synovitis, acute traumatic, of hip, knee, and ankle.—C. 42, R. 1.

General contusions.—D. 1. Male, æt. 64. Fell down stairs 3 days before admission; old disease of left leg. Erysipelas; ? paraplegia; sloughing ulcers over sacrum, both hips, heels, and leg; exhaustion. P.M.—Chronic ostitis of left tibia; bedsores.

SPECIAL TABLE I.—*Hernia.**Inguinal.*

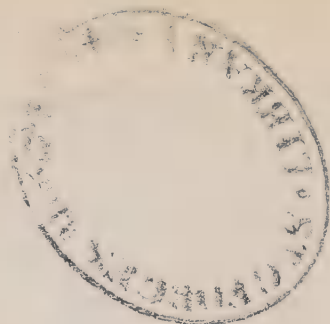
No.	Occupation.	Sex.	Age.	Duration.	Duration of strangulation.	Treatment.	Structure.	Result.	Remarks.
1	Salesman	M.	53	20 years	4 hours	Ice locally	—	C.	Scrotal. Symptoms not urgent.
2	Horsekeeper	M.	60	Chronic	4 days	Taxis	—	C.	Vomiting and abdominal pain.
3	Labourer	M.	51	5 years	1 hour	Ice	—	C.	Sac tapped day after admission, followed by relief. Three days after symptoms of peritonitis appeared; the sac was then opened, and intestine, which was in a recoverable condition, returned, and some omentum, which was thickened, removed.
4	Messenger	M.	70	2 "	7 days	Sac opened	Entero-epiplocele	D.	The abdomen was punctured, and fetid gas allowed to escape from intestine. Died night of operation. P.M.—Gangrene of intestine; some small ulcers not perforating into peritoneal cavity. Extensive peritonitis.
5	Carman	M.	46	5 "	1 ½ hours	Ice	—	C.	Stercoraceous vomiting three days. P.M.—
6	Stableman	M.	47	2 "	6 days	Sac opened	Enterocoele	D.	Peritonitis; fatty heart and liver. Hernia of opposite side.
7	Labourer	M.	47	12 years	14 hours	Ice	—	C.	Abdominal tenderness, vomiting, tension of sac.
8	Gardener	M.	28	3 "	4 "	"	—	C.	

	9	Widow	F.	64	10	2 days	Sac opened	Enterocoele	D.	
	10	Carpenter	M.	20	5 months	1 day	Ice	—	C.	Double direct inguinal, right reducible. Intestine acutely strangulated and inflamed, replaced just within abdominal cavity. Portion of thickened sac removed. Died from exhaustion on third day. No general peritonitis.
	11	—	M.	19	?	?	"	—	C.	Symptoms not acute. Scrotal. Hydrocele. Strangulation at external ring.
	12	Engineer	M.	55	4 years	26 hours	Sac opened	Enterocoele	C.	Much tension of sac; intestine congested.
	13	Nil	M.	70	7 "	3 days	Sac unopened	—	C.	No urgency of symptoms; operation day after admission.
	14	—	M.	66	2½ "	2 "	Ice; enema	—	C.	Inflamed, irreducible.
	15	Labourer	M.	66	22 "	3 "	Sac opened	Enterocoele	C.	Blood and serum in sac; omentum removed and tied.
	16	Confectioner	M.	74	?	?	"	"	C.	Omentum tied and removed. Peritonitis.
	17	—	M.	82	2 days	2 days	"	"	D.	No P.M.
	18	Grocer	M.	32	20 years	2 "	Support	—	C.	Inflamed inguinal.
	19	Jeweller	M.	44	?	—	Pad and bandage	—	R.	Irreducible inguinal.
	20	—	M.	50	?	—	—	—	R.	"
	21	Groom	M.	24	—	2 days	Ice	—	C.	Slightly strangulated.
	22	Carpenter	M.	43	15 years	2 "	"	—	C.	
	23	"	M.	49	14 "	2 "	Taxis	—	C.	
	24	Millwright	M.	71	30 "	18 hours	Sac unopened	—	C.	Temperature did not exceed 100° F.
	25	Coal porter	M.	26	2 "	4 days	Sac opened	Enterocoele	D.	Large piece of omentum removed. ? Congenital hernia. P.M.—Constricted portion six inches long; peritonitis localised.
	26	Infant	M.	1½	Congenital	5 hours	Hot bath	—	C.	

SPECIAL TABLE I.—*Hernia (continued).**Femoral.*

No.	Occupation.	Sex.	Age.	Duration.	Duration of strangulation.	Treatment.	Structure.	Result.	Remarks.
27	Widow	F.	53	30 years	3 hours	Sac unopened	—	C.	Irreducible hernia on opposite side.
28	Married	F.	50	34 "	5 "	Sac opened	Entero-epiplocele	D.	Huge hernial protrusion, size 10 × 8½ inches. Sac opened five days after admission; pendulous sac and integuments removed and brought together with harelip sutures. Numerous firm adhesions. Died six days after operation. P.M.—Edema of lungs; old rupture of transverse colon covered over by omentum; incipient peritonitis.
29	Blacksmith	M.	58	7 "	4 days	Taxis	—	C.	Vomiting stercoraceous; intestine congested and gangrenous; artificial anus made.
30	Tailor	M.	55	2 "	14 hours	"	—	C.	Collapse. Died day after operation. P.M.—Acute peritonitis.
31	Married	F.	57	?	6 days	Sac opened	Enterocoele	D.	Thickened omentum removed. Portion of sac cut away. Retention; cystitis.
32	"	F.	49	4 years	18 hours	"	Entero-epiplocele	C.	Some omentum ligatured and taken away.
33	"	F.	42	6 months	2 days	"	Enterocoele	C.	Small knuckle of intestine; edges of sac brought together. Omentum removed.
34	Widow	F.	66	11 years	4 "	"	"	C.	Abdomen much distended; constipation; no strangulation.
35	"	F.	68	3 "	36 hours	"	Entero-epiplocele	C.	
36	Single	F.	35	9 months	3 weeks	"	"	C.	
37	Married	F.	40	6 years	36 hours	"	Enterocoele	C.	
38	"	F.	38	10 "	3 days	"	Entero-epiplocele	C.	
39	"	F.	63	—	1 week	Taxis	—	C.	
40	"	F.	52	9 years	—	Ice; enema	—	R.	
41	—	F.	46	3 "	1 week	Truss	—	C.	
42	Smith	M.	51	4 "	20 hours	Taxis	—	C.	
43	Single	F.	36	2 "	2 days	Ice	—	C.	

44	Married	F.	26	2 months	9 hours	Sac unopened	? Enterocoele	C.	Radical cure by invagination of sac.
45	"	F.	46	14 years	20 "	Sac opened	Enteropiplocele	C.	Two small omental cysts besides intestine.
46	"	F.	45	10 "	15 "	"	"	C.	Pneumonia.
47	Single	F.	48	Chronic	15 "	"	"	C.	Much matted omentum removed. Intestine much congested.
48	Widow	F.	63	14 years	6 days	"	"	C.	Omentum cut away.
Umbilical.									
49	Widow	F.	62	9 years	5 days	Sac opened	Enteropiplocele	D.	Removal of omentum. Stercoraceous vomiting. Died day after operation. P.M.—Many bands found partially nipping intestine.
50	Single, nurse	F.	61	10 "	10 hours	"	"	D.	Patient very corpulent, weighing twenty stone. Stricture very acute; intestine darkly congested, much thickened, matted, and adherent omentum. Collapse.
51	Widow, theatrical	F.	69	Chronic	12 "	"	"	D.	Intestine acutely strangulated; no peritonitis. Died somewhat suddenly. P.M.—Fatty liver and heart; cirrhosis of kidneys.
52	Wheelwright	M.	63	20 years	3 days	"	"	D.	Vomiting stercoraceous. Collapse. P.M.—Fatty liver and heart; much adherent; great omentum in sac.
53	Married	F.	30	—	3 "	Ice	—	R.	No distress on admission. Died on nineteenth day from exhaustion. P.M.—Sac filled with transverse colon, pyloric end of stomach, and omentum. No peritonitis.
54	Widow, needle	F.	48	10 years	14 "	Belladonna application	—	D.	
55	Married	F.	56	—	2 "	Ice	—	C.	
56	Betting man	M.	56	5 years	4 hours	"	—	R.	
Ventral.									
57	Labourer	M.	42	20 years	6 days	Support	Epiplocele	R.	



SPECIAL TABLE II.—ERYSIPELAS.

(Developed in Hospital.)

1. Male, æt. 36. Recurrent epithelioma of lip. 2 days after application of galvanic cautery. Duration 7 days. Relieved.
2. Female, æt. 19. Sarcoma of lower jaw. 15 days after second operation. Lasted 8 days. Relieved.
3. Female, æt. 65. Lipoma of neck. 3 days after removal. 5 days' duration. Cured.
4. Female, æt. 23. Lupus of nose. Appeared without any exciting cause. Erythema disappeared in 2 days. Cured.
5. Male, æt. 40. Sebaceous tumour of neck. 11 days after operation. Lasted 13 days. Cured.
6. Male, æt. 33. Perineal fistula. 6 days after perineal section. Lasted 7 days. Cured.
7. Male, æt. 16. Necrosis of superior maxilla. Appeared in connection with sinus of cheek. Lasted about a week. Cured.
8. Male, æt. 32. Necrosis of femur. Appeared day after probing. Has had several previous attacks. Cured.
9. Male, æt. 25. Necrosis of os calcis. 10th day after incision. Duration 18 days. Cured.
10. Male, æt. 13. Caries of temporal bone. Erysipelas of face. Duration a week. Cured.
11. Male, æt. 6. Disease of hip. 6 days after excision. Lasted 14 days. Cured.
12. Female, æt. 19. Disease of hip. In connection with abscess of thigh. Duration 3 weeks. Cured.
13. Female, æt. 35. Disease of knee. 20 days after excision. Duration 14 days. Cured.
14. Male, æt. 26. Caries of metatarso-phalangeal joint. 1 month after sequestrotomy. Lasted 24 days. Cured.
15. Female, æt. 26. Deformity of nose. Plastic operation, followed in 4 days by erysipelas. Lasted 7 days. Cured.
16. Male, æt. 1½. Abscess of hip. After incision. Duration 5 days. Cured.
17. Male, æt. 32. Abscess of thigh. One week after incision. Cured.
18. Male, æt. 30. Abscess of foot. Following incision of arm. Lasted 4 weeks. Cured.

19. Male, æt. 32. Lacerated wound of scalp. 6 days after admission. Duration 20 days. Cured.
20. Female, æt. 65. Lacerated wound of scalp. 17 days after accident. Lasted 2 weeks. Cured.
21. Male, æt. 58. Wound of face. 11 days after admission. Duration 18 days. Cured.
22. Male, æt. 38. Scalp wound, followed in 9 days by erysipelas. Lasted 10 days. Cured.
23. Female, æt. 5. Needle wound of foot. 1 month after admission. Duration 14 days. Cured.
24. Male, æt. 35. Compound comminuted fracture of both legs. Erysipelas after amputation. Lasted 17 days. Cured.
25. Male, æt. 64. General contusions. Erysipelas of trunk. Died from sloughing and exhaustion.
26. Female, æt. 39. Scirrhus of mamma. Excision of breast; antiseptic. Cured.
27. Female, æt. 43. Scirrhus of mamma. Excision of breast, followed two days after by erysipelas, lasting 10 days. Cured.
28. Male, æt. 44. Epithelioma of tongue. Partial excision. Three months after erysipelas developed. Went out cured.
29. Male, æt. 10 months. Lipoma of arm. Removed. Lasted 7 days. Cured.
30. Female, æt. 43. Ostitis of tibia. Erysipelas after probing. Cured.
31. Male, æt. 19. Acute necrosis of left tibia. Lasted 3 weeks. Relieved.
32. Male, æt. 5. Necrosis of os calcis. Sequestrotomy, followed in 20 days by erysipelas. Cured.
33. Male, æt. 7. Disease of hip. Erysipelas 2 months after excision, lasting 23 days. Relieved.
34. Male, æt. 10. Disease of hip. Erysipelas 3 months after excision. Relieved.
35. Female, æt. 31. Contracted flexor tendons of hand. Forcible straightening of fingers, with rupture of skin. Erysipelas 26 days after. Cured.
36. Male, æt. 38. Wound of forehead. Delirium tremens. Erysipelas 5 days after wound. Cured.
37. Female, æt. 25. Wound of forehead and? fracture of superior maxilla. Lasted 4 days. Cured.
38. Female, æt. 13. Compound comminuted fracture of leg. Sequestrotomy, followed by erysipelas one month after, lasting three weeks. Cured.



SURGICAL REPORT.

1881.

By WILLIAM HENRY BATTLE, F.R.C.S.

General Statement.

Number of surgical beds	241			
„ of patients in hospital January 1st, 1881	234	{	Males 129	
			Females 105	
„ „ „ December 31st, 1881	227	{	Males 123	
			Females 104	
„ „ treated to a termination during the year 1881	2329			
	Total.		Males.	Females.
Discharged cured	1457	...	897	560
„ relieved	662	...	439	223
„ unrelieved	47	...	14	33
Died	163	...	114	49
	2329	...	1464	865

Average number of deaths 6·9 per cent.

„ „ days in hospital 37.

Average number of surgical deaths since the opening of the new Hospital in 1871.¹

1871-72 . . . 7·7 per cent.	1876-77 . . . 7·5 per cent.
1872-73 . . . 8·5 „	1877-78 . . . 7·7 „
1873-74 . . . 9·1 „	1878-79 . . . 6·0 „
1874-75 . . . 8·7 „	1879-80 . . . 6·2 „
1875-76 . . . 6·6 „	1880-81 . . . 6·9 „

¹ The above list includes many cases brought into the hospital dead or dying.

TABLE I.—*Abstract, showing Diseases, Injuries, &c., in*

DISEASE.	Total.	Sex.		Age.								Duration before admission.							
		M.	F.	Under 5	5-10	-20	-30	-40	-50	-60	Above 60	Dys. 1-4	Dys. 5-13	Wks 2-4	Mts. 1-2	Mts. 2-6	Mts 6-12	Chronic.	
GENERAL DISEASES.																			
Erysipelas (arising)	.35	21	14	5	2	5	11	4	6	...	2	2	...	...	...	...	...	...
Do. (admitted as such)	.69	52	17	5	5	6	17	8	18	7	3	29	32	5	...	...	...	...
Pyæmia (arising)	.2	2	...	...	...	...	1	...	...	...	1	...	...	...	...	...	...	...
Do. (admitted with it)	.3	2	1	...	1	1	...	...	...	1	...	...	...	...	...	...	...	...
Syphilis—																			
1. Primary, by—																			
Indurated sore	.8	2	6	...	...	3	4	1	...	...	...	...	1	3	3	1	...	...
2. Secondary	.45	2	43	...	...	28	15	2	...	...	...	...	1	5	10	17	1	6
3. Tertiary	.5	3	2	...	...	...	4	1	...	...	...	...	...	2	...	2	1	...
4. Congenital	.1	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...
LOCAL DISEASES.																			
TUMOURS.																			
Carcinomata—																			
Scirrhus of—																			
a. Breast	.38	...	38	...	...	...	1	8	15	5	9	...	...	3	3	6	5	21
b. Do. (recurrent)	.2	...	2	...	...	...	...	1	1	...	...	...	...	...	...	2	...	...
c. Axillary glands	.4	...	4	...	...	...	...	...	4	...	...	...	...	1	1	2	...	...
d. Rectum	.4	3	1	...	...	...	1	...	1	...	2	...	...	...	...	3	...	1
Encephaloid of—																			
a. Breast	.1	...	1	...	...	...	...	...	1	...	...	...	...	...	...	1	...	...
b. Do. (recurrent)	.1	...	1	...	...	...	...	...	1	...	...	...	...	1	...	...	...	...
Epithelioma of—																			
a. Tongue	.11	11	...	...	...	...	...	...	4	4	3	...	...	...	2	6	...	3
b. Lip	.7	7	...	...	...	...	...	...	2	2	3	...	...	...	...	1	2	4
c. Mouth	.4	4	...	...	...	...	...	1	2	1	...	...	...	...	...	4	...	...
d. Nose	.2	2	...	...	...	...	...	...	...	...	2	...	...	...	...	...	...	2
e. Lower extremity	.3	3	...	...	...	...	...	1	1	...	1	...	...	...	...	1	2	...
f. Glands	.3	3	...	...	...	...	1	...	...	...	2	...	...	...	...	3	...	...
g. Oesophagus	.1	...	1	...	...	...	...	...	1	...	...	...	...	...	...	1	...	...
h. Rectum	.4	3	1	...	...	...	...	1	1	1	1	...	...	...	...	...	1	3
i. Genitals	.3	2	1	...	...	...	...	1	1	1	...	...	...	...	...	1	1	1
Sarcomata—																			
a. Palate	.2	...	2	...	...	...	...	...	1	1	...	...	...	...	1	...	...	1
b. Upper jaw	.2	2	...	...	...	...	...	...	...	1	1	...	...	...	1	1	...	...
c. Lower jaw	.2	2	...	...	...	2	...	...	...	...	...	...	...	...	1	...	1	...
d. Frontal	.1	...	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1
e. Neck	.2	1	1	...	...	...	1	1	...	...	...	...	...	...	...	1	...	1
f. Chest-wall	.1	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...
g. Parotid region	.3	1	2	...	...	...	1	...	2	...	...	...	...	...	...	2	1	...
h. Breast	.1	...	1	...	...	...	...	...	...	1	...	...	...	...	...	1	...	...

Classes, according to authorised Nomenclature.

Duration of residence.									Result.				Remarks.
	Dys. 4-5-13	Wks 2-4	Mts. 1-2	Mts. 2-4	Mts. 4-6	Mts. 6-9	Mts. 9-12	Above a year.	C.	R.	U.	D.	
	6	8	10	4	5	1	1	...	27	2	...	6	Fatal cases: sarcoma of neck, epithelioma of jaw, excision of hip, dislocation of shoulder, necrosis of os calcis, burn.
5	26	20	15	2	1	...	...	...	63	...	...	6	1 vaccino-erysipelas, 1 coma, 1 convulsions, 3 cellulo-cutaneous.
	...	...	2	...	...	...	...	...	...	...	...	2	<i>Vide</i> Special Table—Pyæmia.
2	1	...	...	...	...	...	...	...	...	...	...	3	Ditto.
	...	3	2	1	1	1	...	...	4	4	...	...	Eruptions in 4, hæmorrhage in 1.
	2	7	19	10	6	1	...	...	33	12	...	...	<i>Vide</i> General Summary.
	1	1	2	...	...	...	...	1	4	1	...	...	Ulceration of palate, leg, nose 2, penis.
	...	...	1	...	...	...	...	...	...	...	...	1	Marasmus, convulsions.
3	2	13	19	...	...	...	...	...	28	4	3	3	In 4 ulceration of skin over tumour, 1 cystic. See General Summary.
	...	...	2	...	...	...	...	...	2	...	...	...	In cicatrix of operation.
	2	1	1	...	...	...	...	...	3	1	...	...	Removal in 3.
1	1	...	...	1	1	...	...	...	...	1	1	2	Deaths: 1 after colotomy, 1 peritonitis.
	...	...	1	...	...	...	...	...	1	...	...	...	Amputation.
	...	1	...	...	...	...	...	...	1	...	...	...	In cicatrix of operation.
1	3	5	2	...	...	...	...	...	2	6	2	1	
	2	5	...	...	...	...	...	...	6	1	...	...	2 of upper lip.
2	...	1	...	...	1	...	...	...	...	3	...	1	
	...	2	...	...	...	...	...	...	...	1	...	1	
	...	...	1	1	1	...	...	...	1	2	...	...	Amputation of leg 1, toe 1, scraping 1.
	...	2	1	...	...	...	...	...	2	1	...	...	Inguinal 2, axillary 1.
	...	1	...	...	...	...	...	...	...	...	...	1	
	1	2	...	1	...	...	...	...	...	3	1	...	Colotomy 1, of anus 1.
	...	...	2	1	...	...	...	...	1	1	...	1	Vulva 1, perinæum 1, penis 1.
	...	...	2	...	...	...	...	...	1	1	...	...	Both recurrent.
	1	...	1	...	...	...	...	...	...	...	1	1	No operation.
	...	2	...	...	...	...	...	...	...	2	...	...	Epulis.
	1	...	...	...	...	...	...	...	...	1	...	...
	...	...	1	1	...	...	...	...	...	1	...	1	1 primary of glands, 1 recurrent.
1	...	...	...	...	...	...	...	...	...	...	1	...	
	...	2	1	...	...	...	...	...	...	2	...	1	Melanotic 1; readmission 1, convulsions.
	...	...	1	...	...	...	...	...	1	...	...	...	Amputation.

TABLE I.—*Abstract, showing Diseases, Injuries, &c., in*

DISEASE.	Total.	Sex.		Age.								Duration before admission						
		M.	F.	Under 5	5-10	-20	-30	-40	-50	-60	Above 60	Dys. 1-4	Dys. 5-13	Wks 2-4	Mts. 1-2	Mts. 2-6	Mts. 6-12	Chronic.
LOCAL DISEASES.																		
TUMOURS.																		
<i>Sarcomata—continued.</i>																		
<i>i.</i> Testis . . .	2	2	...	...	...	...	1	1	...	...	...	...	...	...	...	...	1	...
<i>k.</i> Lower extremity . . .	5	...	5	...	...	1	...	1	2	...	1	...	...	...	...	2	1	...
<i>l.</i> Rectum . . .	1	1	...	...	...	...	1	...	...	...	...	...	...	...	...	1	...	...
Adenoma—																		
Breast . . .	9	...	9	...	...	...	5	3	1	...	...	...	...	...	...	5	1	...
Lipoma . . .	12	4	8	...	...	1	3	5	2	1	...	...	...	...	...	1	2	...
Papilloma . . .	1	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...
Angioma . . .	1	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...
Exostosis . . .	5	2	3	...	...	4	1	...	...	...	...	...	...	...	...	1	2	...
Neuroma . . .	2	1	1	...	...	...	2	...	...	...	...	...	...	...	1	...	...	...
Fibroma . . .	5	2	3	...	...	...	1	1	3	...	...	...	...	...	...	...	...	...
Myo-fibromata . . .	3	...	3	...	...	...	...	2	1	...	...	...	...	...	...	...	...	...
Molluscum . . .	1	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...
Nævus vascularis . . .	4	1	3	3	1	...	...	...	...	...	...	...	...	...	...	...	...	...
Glandular . . .	4	...	4	...	...	...	1	2	1	...	...	...	...	...	...	...	1	...
Polypus . . .	1	...	1	...	...	...	...	1	...	...	...	...	...	...	...	1	...	...
Rodent ulcer . . .	3	1	2	...	...	...	...	...	2	1	...	...	...	...	...	...	2	...
Lupus . . .	3	1	2	...	...	1	...	2	...	...	...	...	...	...	...	...	...	...
Keloid . . .	1	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...
Cystic—																		
<i>a.</i> Ovarian . . .	18	...	18	...	...	...	7	2	6	3	...	...	...	...	...	5	3	10
<i>b.</i> Sebaceous . . .	2	...	2	...	...	...	1	...	1	...	...	...	...	...	...	...	...	...
<i>c.</i> Dermoid . . .	1	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...
<i>d.</i> Hydatid . . .	1	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...
<i>e.</i> Other cysts . . .	6	6	...	...	1	...	4	1	...	...	...	...	...	...	...	...	1	...
NERVOUS SYSTEM.																		
Tetanus (admitted as such)	2	2	...	...	...	1	...	...	...	...	1	2	...	...	...	...	...	...
Meningitis . . .	1	...	1	...	1	...	...	...	...	...	...	1	...	...	...	...	...	...
Paralysis of ulnar nerve . . .	1	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...
Hyperæsthesia of cicatrix . . .	2	1	1	...	...	...	...	1	...	1	...	...	...	...	...	...	1	...
Infantile paralysis . . .	3	...	3	...	2	1	...	...	...	...	...	...	...	...	...	...	...	...
CIRCULATORY SYSTEM.																		
Aneurism . . .	2	1	1	...	...	...	...	...	...	1	1	...	...	...	1	...	1	...
Varicose veins . . .	4	2	2	...	...	...	3	...	...	...	1	...	...	...	...	1	...	...
Phlebitis . . .	3	1	2	...	...	...	...	1	...	2	...	...	2	1	...	...	...	...
Thrombosis of vein . . .	4	1	3	...	...	...	...	...	...	...	...	...	3	1	...	...	...	...
Hæmorrhage . . .	6	4	2	...	...	1	2	...	...	2	1	6	...	...	...	...	...	...
Gangrene . . .	6	5	1	...	...	2	...	...	3	...	1	2	1	1	1	1	...	...

Classes, according to authorised Nomenclature—continued.

Duration of residence.								Result.				Remarks.
Dys. 5-13	Wks 2-4	Mts. 1-2	Mts. 2-4	Mts. 4-6	Mts. 6-9	Mts. 9-12	Above a year.	C.	R.	U.	D.	
1	...	1	...	...	...	...	...	...	1	...	1	Castration, 1 peritonitis.
...	...	1	1	2	1	...	...	2	1	...	2	2 of femur, amputation, died; deposit in lungs.
...	1	...	...	...	...	...	...	...	1	...	...	Completely surrounding canal.
1	4	4	...	...	...	...	...	8	1	...	...	Excision 8, cystic 2.
...	7	4	1	...	...	...	...	10	2	...	...	Multiple 2, hip 1, shoulder 3, forehead 1, chest 2, arm 1, back 2.
...	...	1	...	...	...	...	...	1	...	...	...	Congenital of scalp.
...	...	1	...	...	...	...	...	1	...	...	...	Cheek.
2	3	...	...	...	...	...	...	3	...	2	...	Subungual of toe 2, humerus 2, tibia 1.
...	1	...	...	...	...	...	...	...	1	1	...	Both on branches of ulnar nerve.
2	2	...	...	...	...	...	...	5	...	...	...	Removed.
1	...	1	1	...	...	...	...	...	1	...	2	Removal 2.
...	...	1	...	...	...	...	...	1	...	...	...	Hairy and pigmented.
...	...	1	1	...	...	...	...	2	2	...	...	Nose, chest, finger, lip.
...	3	1	...	...	...	...	...	3	1	...	...	Neck 3, axilla 1.
1	...	...	...	...	...	...	...	1	...	...	...	Associated with fissure.
...	2	1	...	...	...	...	...	3	...	...	...	Forehead, scalp, face; 2 recurrent.
...	1	1	1	...	...	...	...	2	1	...	...	Face and nose, nose, under jaw and over clavicle.
...	1	...	...	...	...	...	...	1	...	...	...
4	3	7	...	...	...	...	...	12	2	...	4	Ovariectomy in 17, of whom 4 died.
1	1	...	...	...	...	...	...	2	...	...	...	Arm 1, neck 1.
...	1	...	...	...	...	...	...	1	...	...	...
...	...	...	...	1	...	...	...	1	...	...	...	Of liver, paracentesis and abdominal section.
1	2	3	...	...	...	...	...	4	2	...	...	Of spermatic cord 3, congenital of chest-wall 1, behind angle of jaw 1, front of neck 1.
2	...	...	...	...	...	...	...	...	...	...	2	Punctured wound of foot, contused wounds of face.
...	1	...	...	...	...	...	...	1	...	...	...	Subacute.
...	...	...	...	1	...	...	...	1	...	...	...	Excision of cicatrix.
1	...	1	...	...	...	...	...	1	1	...	...	After excision of shoulder, amputation of breast.
1	1	...	1	...	...	...	...	1	...	2	...	Amputation of leg 1.
...	...	...	1	1	...	...	...	2	...	...	...	Groin 1, axillary 1.
...	3	...	1	...	...	...	...	2	2	...	...	Excision of part of vein 1.
2	1	...	...	...	...	...	...	3	...	...	...	Varicose veins 2.
1	1	2	...	...	...	...	...	4	...	...	...	Varicose veins 1, anæmia 1, both legs affected.
2	2	2	...	...	...	...	...	5	1	...	...	Epistaxis 4, varicose ulcer 1, after circumcision, 1.
1	1	2	2	...	...	...	...	4	1	...	1	Toes 3, finger 2, penis 1.

TABLE I.—*Abstract, showing Diseases, Injuries, &c., in*

DISEASE.	Total.	Sex.		Age.								Duration before admission							
		M.	F.	Under 5	5-10	-20	-30	-40	-50	-60	Above 60	Dys. 1-4	Dys. 5-13	Wks 2-4	Mts. 1-2	Mts. 2-6	Mts. 6-12	Chronic	
GLANDULAR SYSTEM.																			
Inflammation . . .	2	1	1	...	...	...	1	1	...	...	...	...	...	...	1	1	...	...
Abscess . . .	12	3	9	2	...	3	4	2	1	...	...	1	3	6	1	...	...	...
Angeioleucitis . . .	10	9	1	...	1	1	2	4	1	1	...	4	1	4	...	1	...	...
Caseous degeneration . .	4	3	1	1	...	1	...	1	1	...	...	...	...	...	1	1	...	...
Mammary suppuration . .	3	...	3	...	...	...	3	...	...	...	...	...	...	2	...	...	...	...
DISEASES OF DUCTLESS GLANDS.																			
Bronchocele . . .	3	1	2	...	...	1	...	2	...	...	...	...	...	...	...	...	...	...
RESPIRATORY SYSTEM.																			
Diphtheria . . .	1	...	1	1	...	...	...	...	...	...	...	...	...	1	...	...	...	...
Foreign body . . .	2	2	...	...	1	1	...	...	...	...	...	2	...	...	...	...	...	...
DIGESTIVE SYSTEM.																			
Cancrum oris . . .	1	1	...	1	...	...	...	...	...	...	...	...	1	...	...	...	...	...
Acute glossitis. . .	1	1	...	...	...	1	...	...	...	...	...	1	...	...	...	...	...	...
Tonsillitis . . .	2	1	1	...	...	...	2	...	...	...	...	1	1	...	...	...	...	...
Abscess of fauces . . .	3	2	1	...	...	...	2	1	...	...	...	2	1	...	...	...	...	...
Œsophageal stricture . .	1	...	1	...	...	...	...	...	...	...	1	...	...	...	...	1	...	...
Strangulated hernia—																			
<i>a.</i> Inguinal . . .	27	27	...	5	...	1	1	7	9	1	3	26	1	...	...	...	...	...
<i>b.</i> Femoral . . .	13	4	9	...	...	...	...	3	5	1	4	11	1	...	...	...	...	...
<i>c.</i> Umbilical . . .	2	1	1	...	...	...	...	...	1	...	1	1	1	...	...	...	...	...
Herniæ—																			
Inguinal, irreducible . .	6	6	...	...	...	1	1	2	2	...	...	1	...	...	...	...	...	3
incarcerated. . .	1	...	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1
Femoral, irreducible . .	4	1	3	...	...	...	1	1	1	...	1	...	1	1	...	...	1	1
Umbilical, irreducible . .	2	...	2	...	...	...	...	...	...	...	2	...	...	...	...	...	...	2
Ventral . . .	1	...	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1
Intestinal obstruction . .	4	1	3	...	1	...	...	...	2	1	...	1	2	1	...	...	...	...
Peritonitis . . .	2	1	1	...	...	1	1	...	...	...	...	2	...	...	...	...	...	...
Fistula* in ano . . .	22	14	8	...	...	4	5	4	7	...	2	...	1	1	1	3	3	13
Hæmorrhoids . . .	14	11	3	...	...	...	...	5	5	4	...	...	...	...	...	...	1	13
Ulcer of rectum . . .	3	3	...	...	...	...	1	1	1	...	...	1	...	...	...	...	...	2
Stricture of rectum . . .	5	...	5	...	...	1	1	1	2	...	...	...	...	...	...	...	3	2
GENITO-URINARY SYSTEM.																			
Phimosis . . .	7	7	...	1	1	3	1	...	...	1	...	...	...	...	...	...	...	7
Paraphimosis . . .	1	1	...	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...
Hydrocele . . .	4	4	...	...	...	...	1	2	...	...	1	...	...	...	...	...	...	4
Do., suppuration of . .	1	1	...	...	...	...	...	...	1	...	...	1	...	...	...	...	...	...

Classes, according to authorised Nomenclature—continued.

Duration of residence.								Result.				Remarks.
Dys. -18	Wks 2-4	Mts. 1-2	Mts. 2-4	Mts. 4-6	Mts. 6-9	Mts. 9-12	Above a year.	C.	R.	U.	D.	
...	...	2	1	1	Axilla 4, groin 3, popliteal 2, cervical 3. Leg 5, arm 5. Struma. Acute abscess 1, chronic 1, sinuses 1.
3	5	4	...	...	...	...	...	11	1	...	...
3	5	2	...	...	...	...	...	9	...	...	1
...	3	...	...	...	...	...	...	3	3	1	...
1	2	3	Excision of thyroid 1.
...	...	...	...	...	...	...	...	...	2	...	1
1	...	1	...	...	...	...	...	...	2	...	1
...	...	1	...	...	...	...	...	1	...	...	...
...	1	...	1	2	Tracheotomy. Tracheotomy 1, laryngotomy 1.
...	...	...	...	...	...	...	...	...	...	...	1
...	1	...	...	...	...	...	...	1	...	...	...
2	...	...	...	...	...	...	...	1	1	...	...
1	3	Incisions. Each subject to it; 1 rheumatism. Post-pharyngeal, soft palate, tonsil. Simple fibrous.
1	...	...	...	...	...	...	...	...	...	...	1
1	4	5	3	...	...	...	...	11	8	...	8
1	4	2	3	...	...	...	...	8	...	...	5
1	1	2	Taxis 1, operation 1.
3	1	...	...	...	...	...	...	4	2	...	...
1	...	...	...	...	...	...	...	...	1	...	...
1	2	1	...	...	...	...	...	1	3	...	...
...	1	1	1	Fatal case: internal strangulation by band. Ten years after ovariectomy. Vide General Summary of Diseases. Perforation of simple ulcer 1, typhoid ulcer 1.
...	...	1	...	...	...	...	...	...	1	...	...
2	...	...	1	1	...	...	...	3	...	...	1
...	1	...	...	...	...	...	...	...	...	2	...
8	9	3	15	4	2	1	Fatal case: phthisis. Complicated by fissure 1. Hæmorrhage 1.
4	9	...	...	...	...	...	...	14	...	...	...
1	...	...	...	1	...	...	...	...	3	...	...
...	1	1	3	...	...	...	...	2	2	...	1
3	1	1	7	Circumcision 6, congenital 5. Incisions.
1	...	...	...	...	...	...	...	1	...	...	...
2	1	...	...	...	...	...	...	4	...	...	...
...	...	1	...	...	...	...	...	1	...	...	...

TABLE I.—Abstract, showing Diseases, Injuries, &c., in

DISEASE.	Total.	Sex.		Ages.									Duration before admission.						
		M.	F.	Under 5	5-10	-20	-30	-40	-50	-60	Above 60	Dys. 1-4	Dys. 5-13	Wks 2-4	Mts. 1-2	Mts. 2-6	Mts. 6-12	Chronic.	
GENITO-URINARY SYSTEM																			
—continued.																			
Varicocele	2	2	...	...	...	1	1	...	...	...	...	...	...	...	1	...	...	...
Epidymitis acute	3	3	...	...	...	...	3	...	...	...	...	1	1	1	...	...	...	...
Do., tubercular	4	4	...	...	...	1	3	...	...	...	...	...	...	1	3	...	...	...
Undescended testis	1	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...
Syphilitic testis	1	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...
Vulvitis	2	...	2	1	...	1	...	...	...	...	...	...	2	...	...	...	...	...
Ulcer of vulva	1	...	1	1	...	...	...	...	...	...	...	...	...	1	...	...	...	...
Abscess of labium	5	...	5	...	...	3	2	...	...	...	...	...	3	2	...	...	...	...
Rupture of perinæum	3	...	3	...	1	...	2	...	...	...	...	...	...	...	...	...	...	...
Vesico-vaginal fistula	1	...	1	...	...	...	1	...	...	...	...	...	...	...	1	...	...	...
Vesical irritation	2	2	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...
Atony of bladder	3	3	...	...	...	...	...	...	...	1	2	...	...	2	...	...	1	...
Cystitis	3	2	1	...	...	1	...	...	...	...	2	...	1	...	...	1	...	...
Ulceration of bladder	1	1	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...
Malignant disease of do.	2	2	...	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...
Hæmaturia	1	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...
Stricture of urethra	24	24	...	...	...	...	1	10	7	2	4	1	...	1	...	3	2	1
Retention of urine	16	16	...	...	...	1	3	5	2	2	3	15	...	1	...	...	...	...
Perineal abscess	4	4	...	...	...	...	...	2	1	1	...	...	3	1	...	...	...	...
Extravasation of urine	2	2	...	...	...	...	...	1	...	...	1	2	...	...	...	...	...	...
Urinary fistula	4	4	...	...	...	...	...	2	1	...	1	...	1	...	...	1	...	...
Abscess of prostate	1	1	...	...	...	1	...	...	...	...	...	...	...	...	1	...	...	...
Hydronephrosis	4	4	...	...	4	...	...	...	...	...	...	...	...	...	1	2	1	...
Calculus—																			
1. Kidney	1	...	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...
2. Bladder	3	2	1	...	1	...	...	1	1	...	...	...	...	...	...	...	1	...
3. Urethra	1	1	...	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...
OTHER AFFECTIONS OF GENERATIVE ORGANS.																			
Gonorrhœa	20	1	19	...	...	13	7	...	...	...	...	...	3	6	4	6	...	...
Soft sore	24	6	18	1	...	12	11	...	...	...	...	1	4	3	9	3	1	...
Warts	2	2	...	...	...	1	1	...	...	...	...	...	...	...	...	1	1	...
DISEASES OF BONES.																			
Rachitis	1	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Periostitis of—																			
a. Femur, acute	1	1	...	...	...	1	...	...	...	...	...	...	...	1	...	...	...	...
chronic	2	2	...	...	...	...	2	...	...	...	...	...	...	...	...	1	...	...
b. Tibia, acute	4	3	1	1	1	1	...	...	...	...	...	1	1	2	...	...	...	...
chronic	4	2	2	...	...	1	2	...	...	1	...	...	...	...	1	1	2	...
Ostitis	2	1	1	...	...	1	...	1	...	...	...	1	...	...	1	...	...	...

Classes, according to authorised Nomenclature—continued.

Duration of residence.								Result.				Remarks.
Dys. 5-13	Wks 2-4	Mts. 1-2	Mts. 2-4	Mts. 4-6	Mts. 6-9	Mts. 9-12	Above a year.	C.	R.	U.	D.	
...	1	1	...	...	...	...	...	1	1	...	...	Operation 1.
2	1	...	...	...	...	...	...	2	1	...	...	Gonorrhœa 3, 1 with orchitis and acute hydrocele.
2	1	1	...	...	...	...	...	...	3	...	1	Abscess in 3, tubercular pyelitis 1.
...	...	...	1	...	...	...	...	1	...	...	...	Groin, painful; castration.
...	...	1	...	...	...	...	...	...	1	...	...	Double; castration right side.
1	1	...	...	...	...	...	...	2	...	...	...
...	1	...	...	...	...	...	...	1	...	...	...	Traumatic.
4	1	...	...	...	...	...	...	5	...	...	...	Traumatic 1, ? gonorrhœa 2.
...	...	2	...	1	...	...	...	...	3	...	...	Traumatic 2, parturition 1.
...	1	...	...	...	...	...	...	...	1	...	...	Second child, forceps.
...	1	1	...	...	...	...	...	...	2	...	...
2	...	...	1	...	...	...	...	...	3	...	...
2	...	1	...	...	...	...	...	...	1	...	2	Uræmia 1, surgical kidneys 1.
1	...	...	...	...	...	...	...	...	1	...	...
...	2	...	...	...	...	...	...	...	1	...	1	Surgical kidneys.
...	1	...	...	...	...	...	...	...	1	...	...
7	5	8	3	1	...	...	...	15	6	...	3	
6	4	1	...	...	...	...	...	16	...	...	...
2	2	...	...	...	...	...	...	3	1	...	...
...	...	1	1	...	...	...	...	2	...	...	...
...	1	3	...	...	...	...	...	...	3	...	1	
...	...	1	...	...	...	...	...	1	...	...	...	Perineal fistula and retention.
1	1	...	...	2	...	...	...	1	3	...	...	Result of injury, 1 readmitted twice.
...	...	...	...	1	...	...	...	1	...	...	...	Nephrotomy.
...	2	1	...	...	...	...	...	2	...	...	1	Lithotomy 2, dilatation of urethra 1.
...	1	...	...	...	...	...	...	1	...	...	...	External urethrotomy.
4	4	5	5	2	...	...	...	17	3	...	...	7 warts, 1 stricture.
3	7	8	4	2	...	...	...	20	4	...	...	3 phagedænic. 9 bubo, 13 gonorrhœa.
1	1	...	...	...	...	...	...	2	...	...	...	Phimosis 1, pariphimosis 1.
1	...	...	...	...	...	...	...	...	1	...	...
...	...	...	1	...	...	...	...	1	...	...	...
1	...	1	...	...	...	...	...	...	2	...	...
...	2	...	...	...	...	1	...	2	1	...	1	Amputation 1. Died: pyæmia 1.
2	2	...	...	...	...	...	...	3	1	...	...	All syphilitic.
1	...	1	...	...	...	...	...	1	1	...	...	1 chronic, 1 subacute.

TABLE I.—Abstract, showing Diseases, Injuries, &c., in

DISEASE.	Total.	Sex.		Ages.								Duration before admission.						
		M.	F.	Under 5	5-10	-20	-30	-40	-50	-60	Above 60	Dys. 1-4	Dys. 5-13	Wks 2-4	Mts. 1-2	Mts. 2-6	Mts. 6-12	Chronic.
DISEASES OF BONE—continued.																		
Osteomyelitis . . .	1	1	...	...	...	1	...	...	...	...	...	1	...	...	...	...	...	...
Abscess of femur . . .	1	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	1
„ tibia . . .	2	1	1	...	2	...	...	...	...	...	...	...	...	...	...	...	...	2
Necrosis of—																		
<i>a.</i> Frontal . . .	2	2	...	...	...	...	1	...	1	...	...	...	...	...	...	...	...	2
<i>b.</i> Jaw . . .	3	1	2	1	...	...	...	2	...	...	...	...	...	1	...	...	1	1
<i>c.</i> Humerus . . .	1	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	1
<i>d.</i> Ulna . . .	2	2	...	...	...	...	2	...	...	...	...	...	...	...	2	...	...	...
<i>e.</i> Femur . . .	7	6	1	...	1	3	2	...	...	1	...	...	...	...	...	1	...	6
<i>f.</i> Tibia . . .	10	9	1	...	1	5	1	1	1	1	...	...	...	...	1	2	1	6
<i>g.</i> Fibula . . .	1	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	1
<i>h.</i> Bones of foot . . .	9	4	5	1	...	5	2	...	...	...	1	...	...	1	...	3	3	2
Caries—																		
<i>a.</i> Radius . . .	1	1	...	1	...	...	...	...	...	...	...	...	...	...	...	1	...	...
<i>b.</i> Rib . . .	2	1	1	...	...	2	...	...	...	...	...	...	...	...	...	1	...	1
<i>c.</i> Pelvic bones . . .	2	2	...	...	2	...	...	...	...	...	...	...	...	...	...	2	...	...
<i>d.</i> Tibia . . .	3	1	2	...	...	2	...	...	1	...	...	...	...	...	...	3	...	...
<i>e.</i> Mastoid cells . . .	3	3	...	1	...	...	1	1	...	...	...	...	...	3	...	...	...	...
<i>f.</i> Tarsus . . .	5	4	1	...	1	2	1	1	...	...	...	...	...	...	...	1	...	4
<i>g.</i> Carpus . . .	2	1	1	...	...	1	...	...	1	...	...	...	...	...	...	1	...	1
DISEASES OF JOINTS.																		
Shoulder—																		
<i>a.</i> Chronic . . .	7	2	5	...	...	3	3	1	...	...	...	...	...	...	...	...	3	4
<i>b.</i> Hysterical . . .	1	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
Elbow—																		
<i>a.</i> Chronic . . .	2	...	2	...	...	2	...	...	...	...	...	...	...	...	1	...	...	1
<i>b.</i> Ankylosis . . .	3	1	2	...	...	2	...	1	...	...	...	...	...	...	...	1	...	2
Wrist . . .	5	5	...	...	...	...	2	...	1	2	...	...	...	...	2	1	...	2
Sacro-iliac . . .	1	...	1	...	1	...	...	...	...	...	...	...	...	...	1	...	...	...
Hip—																		
<i>a.</i> Incipient . . .	27	14	13	5	4	16	1	1	...	...	...	1	3	1	5	10	4	3
<i>b.</i> Chronic . . .	34	21	13	11	11	7	4	1	...	...	...	...	...	1	2	7	6	18
<i>c.</i> Ankylosis . . .	4	2	2	...	...	1	3	...	...	...	...	...	...	...	...	...	...	4
<i>d.</i> Old excision . . .	1	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	1
<i>e.</i> Rheumatoid . . .	2	1	1	...	...	1	...	...	...	1	...	...	...	1	...	...	...	...
<i>f.</i> Hysteria . . .	1	...	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1
Knee—																		
<i>a.</i> Incipient . . .	14	9	5	4	3	3	3	1	...	...	...	...	2	4	2	5	1	...
<i>b.</i> Chronic . . .	38	26	12	1	12	10	6	4	3	1	1	...	...	...	...	2	4	32
<i>c.</i> Ankylosis . . .	4	1	2	...	1	1	2	...	...	...	...	...	...	...	...	...	...	4
<i>d.</i> Old excision . . .	2	1	1	...	...	1	1	...	...	...	...	...	...	...	...	...	1	1
<i>e.</i> Rheumatoid . . .	6	3	3	...	...	1	...	1	1	3	...	...	1	...	...	2	1	2
<i>f.</i> Hysteria . . .	1	...	1	...	...	...	1	...	...	...	...	...	...	...	...	1	...	...
<i>g.</i> Loose bodies . . .	3	2	1	...	...	1	1	...	1	...	...	...	...	1	...	...	1	1

Classes, according to authorised Nomenclature—continued.

Duration of residence.								Result.				Remarks.
Dys. 6-13	Wks 2-4	Mts. 1-2	Mts. 2-4	Mts. 4-6	Mts. 6-9	Mts. 9-12	Above a year.	C.	R.	U.	D.	
1	...	...	...	...	...	...	...	...	...	...	1	Femur; pyæmia.
...	...	1	...	...	...	...	...	...	1	...	...
...	2	...	...	...	...	...	...	2	...	...	...
...	1	1	...	...	...	...	...	...	2	...	...	Syphilitic.
2	...	...	1	...	...	...	...	1	2	...	...	Lower jaw 1, upper 1.
...	...	...	1	...	...	...	...	...	1	...	...
...	...	2	...	...	...	...	...	2	...	...	...	Olecranon, with suppuration of joint, 1.
...	2	2	1	2	...	...	...	7	...	...	...	Stump 1.
...	2	2	3	...	...	1	2	7	3	...	...	Amputation 1.
...	...	...	1	...	...	...	...	1	...	...	...
1	3	4	1	...	...	...	...	8	...	...	1	Os calcis 4, erysipelas 1.
...	...	...	...	...	...	1	...	...	1	...	...	Strumous; double.
1	...	1	...	...	...	...	...	...	2	...	...
...	...	...	1	...	...	...	1	1	1	...	...
...	...	...	3	...	...	...	...	2	1	...	...
2	1	...	...	...	...	...	...	1	2	...	...	Abscesses.
...	1	2	2	...	...	...	...	2	3	...	...	Double 1, Syme's amputation 1.
...	1	1	...	...	...	...	...	...	2	...	...	Removal of bones 1.
...	3	...	2	...	1	...	...	...	7	...	...
...	...	...	...	...	...	...	...	...	1	...	...
...	1	1	...	...	...	...	...	2	...	...	...	1 traumatic.
...	...	1	...	1	1	...	...	...	3	...	...	Causes: fracture into joint, dislocation, disease.
1	3	1	...	...	...	...	...	3	2	...	...	Amputation 2, gouty 1.
...	1	...	...	...	...	...	...	...	1	...	...
1	1	11	8	4	1	...	1	23	4	...	...	1 typhoid fever.
...	...	3	4	6	9	8	3	16	14	...	4	Tubercle 2, phthisis 1, amyloid degeneration.
1	...	...	...	3	...	...	...	2	2	...	...	Osteotomy 2.
...	...	1	...	...	...	...	...	1	...	...	...
2	...	...	...	...	...	...	...	2	...	...	...	Rheumatism 1, rheumatoid arthritis 1.
...	...	...	1	...	...	...	...	...	1	...	...
2	4	2	4	...	...	...	...	6	7	...	1	Puerperal 1.
4	4	11	12	4	2	...	...	16	19	...	3	
...	...	4	...	...	...	...	...	...	4	...	...
...	1	...	...	1	...	...	...	1	1	...	...	Amputation 1.
3	1	2	...	...	...	...	...	1	5	...	...	Rheumatism 1, rheumatoid arthritis 5.
1	...	...	...	...	...	...	...	1	...	...	...	Knee and ankle.
...	1	1	1	...	...	...	...	2	1	...	...	Removal 2.

Classes, according to authorised Nomenclature—continued.

Duration of residence.								Result.				Remarks.
Dys. 15-18	Wks 2-4	Mts. 1-2	Mts. 2-4	Mts. 4-6	Mts. 6-9	Mts. 9-12	Above a year.	C.	R.	U.	D.	
...	3	2	1	...	...	...	...	1	5	...	...	Syme's amputation 1, excision 1.
...	...	...	1	...	...	...	...	1	...	...	...	Suppuration round joint.
...	...	...	...	...	1	...	...	1	...	...	...	Amputation.
1	...	3	...	...	...	...	...	3	1	...	...	Metatarso-phalangeal joint 2, gout 1, gouty ulceration of big toe-joint 1.
1	...	...	...	...	...	...	...	...	1	...	...	Epileptic.
3	3	6	1	...	2	...	...	17	...	...	...	Paraplegia 2. Abscesses, psoas 4, lumbar 4, cervical 2.
...	1	...	1	...	...	...	...	...	2	...	...	1 readmission.
...	...	...	1	...	...	...	...	...	1	...	...	? Hysterical.
...	...	1	...	...	...	...	...	...	1	...	...
...	...	1	...	...	...	...	...	...	1	...	...
2	...	5	2	...	...	...	...	5	4	...	...	Also clavus 1, measles 1.
3	...	...	2	1	...	...	...	2	4	...	...	Also clavus 1.
...	3	3	2	...	...	...	...	3	6	...	...	Right 3, left 3, double 3.
2	...	2	...	...	...	...	...	...	4	...	...	Rheumatism 1, genu valgum 1.
1	...	...	...	...	...	...	...	...	1	...	...
...	3	...	...	1	...	...	...	2	2	...	...	Left 1, right 3.
...	...	1	4	2	...	...	...	4	3	...	...	Left 1, right 2, double 4, subcutaneous osteotomy 5.
...	...	1	2	...	...	...	...	2	1	...	...	Left 2, double 1.
2	...	...	2	...	...	1	...	3	1	1	...	Osteotomy 3, measles 1.
...	1	1	...	1	1	...	...	1	3	...	...	Rhinoplastic operation 4.
...	1	1	1	...	...	...	...	1	2	...	...	Chronic spinal disease; after excision of ankle; toe.
...	...	1	...	...	...	...	1	2	...	...	...	Foot 1, chest and arm 1.
2	1	...	1	...	...	...	...	1	3	...	...	After fracture 3, after injury to finger 1.
...	1	8	2	...	...	1	...	10	...	2	...	Soft palate 5, hard palate 2, involving both 5.
1	2	2	2	...	1	...	...	2	4	...	2	Double with complete cleft 2, single with complete cleft 5, single with incomplete cleft 1, operation on lip 5.

TABLE I.—*Abstract, showing Diseases, Injuries, &c., in*

DISEASE.	Total.	Sex.		Ages.								Duration before admission.						
		M.	F.	Under 5	5-10	-20	-30	-40	-50	-60	Above 60	Dys. 1-4	Dys. 5-13	Wks 2-4	Mts. 1-2	Mts. 2-6	Mts. 6-12	Chronic.
MALFORMATIONS — <i>continued.</i>																		
c. Of rectum . . .	2	2	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...
d. Epispadias . . .	1	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...
e. Extroversio vesicæ . . .	2	2	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...
APPENDAGES TO MUSCULAR SYSTEM.																		
Tenosynovitis . . .	1	1	...	...	...	1	...	...	...	...	...	1	...	...	...	...	...	...
Thecal suppuration . . .	3	3	...	...	...	1	1	1	...	...	...	1	1	...	1	...	...	...
Ganglion . . .	3	2	1	...	...	3	...	...	...	...	...	...	...	...	...	1	...	2
Bursæ—																		
1. Inflammation—																		
Bursa prepatellaris . . .	5	1	4	...	...	4	...	1	...	...	...	3	...	...	1	...	...	...
2. Suppuration—																		
a. Over trochanter major . . .	3	1	2	...	...	2	1	...	...	...	...	...	...	...	...	2	...	1
b. Bursa prepatellaris . . .	28	10	18	...	3	8	10	5	1	...	...	6	10	12	...	...	...	...
c. Over foot . . .	1	1	...	...	...	1	...	...	...	...	...	...	...	1	...	...	...	...
3. Enlargement—																		
a. Over acromion . . .	1	1	...	...	...	...	...	...	...	...	1	...	...	...	...	1	...	...
b. Under psoas . . .	1	1	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	1
c. Prepatellar . . .	4	1	3	...	...	1	2	1	...	...	...	...	...	2	...	1	...	1
d. Over foot . . .	1	...	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1
CELLULAR TISSUE.																		
Inflammation . . .	1	1	...	...	...	...	...	...	...	...	1	...	...	1	...	...	...	...
Sinus . . .	2	...	2	1	...	...	1	...	...	...	...	...	...	1	...	...	...	1
Abscess—																		
a. Neck . . .	2	2	...	...	...	1	...	...	...	1	...	...	1	1	...	...	...	...
b. Scalp . . .	1	1	...	...	...	...	...	1	...	...	...	...	1	...	...	...	...	...
c. Shoulder . . .	2	2	...	2	...	...	...	...	...	...	...	...	...	1	...	...	...	...
d. Arm . . .	3	2	1	...	1	2	...	...	...	...	...	1	...	...	...	...	...	2
e. Thoracic walls . . .	2	...	2	1	...	...	...	...	1	...	...	...	1	...	...	1	...	...
f. Lumbar . . .	1	1	...	...	...	...	...	...	...	...	1	...	...	...	...	1	...	...
g. Abdominal . . .	1	...	1	...	...	...	...	...	...	1	...	...	...	...	...	1	...	...
h. Perineal . . .	1	1	...	1	...	...	...	...	...	...	...	...	1	...	...	...	...	...
i. Ischio-rectal . . .	4	4	...	...	1	...	1	...	2	...	...	...	3	...	...	...	...	...
k. Buttock . . .	4	3	1	...	1	...	1	...	1	1	...	...	1	2	...	...	...	1
l. Thigh . . .	17	12	5	5	1	4	2	2	2	...	1	...	5	4	3	1	2	2
m. Leg . . .	6	5	1	2	...	...	3	1	...	...	...	...	1	3	...	...	...	1
n. Stump . . .	3	3	...	...	...	...	...	2	1	...	...	1	2	...	...	...	...	...

Classes, according to authorised Nomenclature—continued.

Duration of residence.								Result.				Remarks.
Dys. 5-13	Wks 2-4	Mts. 1-2	Mts. 2-4	Mts. 4-6	Mts. 6-9	Mts. 9-12	Above a year.	C.	R.	U.	D.	
...	1	1	...	...	...	...	...	...	...	...	2	Communication with bladder 1, urethra 1.
...	...	...	...	...	...	...	...	...	...	1	...	
...	...	1	1	...	...	...	...	1	1	...	...
...	...	...	...	...	...	...	...	1	...	...	...
...	3	...	...	...	...	...	...	3	...	...	...	Amputation 2.
...	3	...	...	...	...	...	...	2	...	1	...	
4	1	...	...	...	...	...	...	5	...	...	...
...	...	...	2	...	...	1	...	3	...	...	...
11	12	4	...	...	...	...	...	27	1	...	...
...	...	1	...	...	...	...	...	1	...	...	...
1	...	...	...	...	...	...	...	...	1	...	...
1	...	...	...	...	...	...	...	...	1	...	...
1	1	1	...	...	...	...	...	4	...	...	...
...	1	...	...	...	...	...	...	1	...	...	...
...	...	1	...	...	...	...	...	...	...	...	1	Vide Special Table—Pyæmia.
1	...	1	...	...	...	...	...	2	...	...	...	1 over patella, 1 connected with costal cartilage.
2	...	...	...	...	...	...	...	2	...	...	...
1	...	...	...	...	...	...	...	1	...	...	...
...	2	...	...	...	...	...	...	2	...	...	...
1	2	...	...	...	...	...	...	1	2	...	...	Struma 2.
1	...	1	...	...	...	...	...	2	...	...	...
...	...	1	...	...	...	...	...	...	...	...	1	Chronic tubular nephritis.
...	...	...	1	...	...	...	...	1	...	...	...	5 months after ovariectomy.
1	...	...	...	...	...	...	...	...	...	...	1	Also disease of knee, peritonitis.
2	1	...	1	...	...	...	...	1	3	...	...
1	1	1	...	...	1	...	...	2	1	...	1	
3	5	5	2	2	...	...	...	16	1	...	...
1	3	1	1	...	...	...	...	5	...	...	1	Amyloid degeneration 1.
1	1	...	1	...	...	...	...	3	...	...	...

Classes, according to authorised Nomenclature—continued.

Duration of residence.								Result.				Remarks.
Dys. 1-13	Wks 2-4	Mts. 1-2	Mts. 2-4	Mts. 4-6	Mts. 6-9	Mts. 9-12	Above a year.	C.	R.	U.	D.	
2	2	6	1	11	Exhaustion; fatty degeneration of viscera.
1	1	2	1	...	...	...	...	5	...	...	...
...	...	...	1	...	...	...	...	1	...	...	...
2	1	...	1	...	...	...	...	3	...	...	1
3	3	Amyloid disease 2, medical 1.
1	...	1	5	...	...	...	...	3	3	...	1
1	1	Pyæmia 1, admitted with erysipelas 1. Paraplegia 1.
...	...	1	1	...	...	...	...	2	...	...	1
...	...	1	...	...	...	...	...	...	...	...	1
...	...	...	1	...	...	...	...	1	...	...	...
...	1	...	...	...	...	...	...	1	...	...	...
...	1	...	...	...	...	...	...	1	...	...	...
1	2	1	3	1	Below knee.
...	1	...	...	...	...	...	...	1	...	...	...
...	1	1	After application of acid. Sternum 1, over breast 1. After burn 1, self-inflicted 1. Both legs 5, amputation 2.
1	2	...	...	...	...	...	...	2	1	...	...
...	1	1	...	...	...	...	...	2	...	...	...
2	11	7	3	...	...	...	...	17	6	...	...
...	1	1	After amputation for infantile paralysis.
...	1	1	1	3	All syphilitic.
1	...	2	1	1	...	1	Fatal case; perforating ulcer with diabetes and albuminuria.
...	...	1	1	Scalp 1, legs 2. Syphilitic. Hysteria.
...	2	1	...	...	...	...	...	3	...	...	...
...	...	...	1	...	...	...	...	1	...	...	...
...	1	...	...	...	...	...	...	1	...	...	...

TABLE II.—

INJURIES.	Total.	Sex.		Ages.								Duration before admission.						
		M.	F.	Under 5	5-10	-20	-30	-40	-50	-60	Above 60	Under 1 hour.	Hrs. 1-6	Hrs. 7-12	Hrs. 13-24	Dys. 1-3	Dys. 3-6	Above 6 days.
GENERAL INJURIES.																		
Frostbite . . .	1	...	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...	1
Burns . . .	43	25	18	15	5	11	6	2	3	...	1	2	27	6	1	1	...	2
Scalds . . .	34	19	15	22	3	4	3	1	1	...	...	3	18	2	2	3	2	1
GENERAL CONTUSIONS.	15	11	4	3	4	...	3	2	...	2	1	4	11	...	...	...	...	...
LOCAL INJURIES.																		
<i>Injuries of the head—</i>																		
Scalp wounds . . .	34	30	4	4	3	3	5	8	3	4	4	11	18	2	...	1	2	...
Concussion . . .	59	51	8	7	11	16	7	7	6	3	2	31	20	5	...	2	...	1
Fract. of vault, simple	4	1	3	2	1	...	...	1	...	...	...	1	2	...	...	...	...	1
„ compound . . .	2	2	...	...	...	1	1	...	...	...	...	2	...	...	...	...	...	...
„ com. depressed	2	2	...	...	...	...	1	...	...	1	...	2	...	...	...	...	...	...
„ of base . . .	14	13	1	...	3	...	5	3	...	3	...	1	11	...	1	...	...	...
<i>Injuries of the face—</i>																		
Wounds . . .	14	10	4	4	1	1	...	3	1	4	...	4	9	...	...	...	...	1
Contusions . . .	6	2	4	2	1	1	...	...	...	...	2	2	3	...	...	...	...	1
Wound of tongue . . .	1	1	...	1	...	...	...	...	...	...	...	...	1	...	...	...	...	...
<i>Fracture of—</i>																		
Superior maxilla . . .	4	4	...	...	...	...	...	3	1	...	...	2	2	...	...	...	...	...
Inferior maxilla . . .	1	1	...	...	...	...	...	...	1	...	...	1	...	...	...	...	...	...
<i>Dislocation of—</i>																		
Inferior maxilla . . .	1	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1
<i>Injuries of the eye—</i>																		
Wound of eyelid . . .	1	1	...	1	...	...	...	...	...	...	...	...	1	...	...	...	...	...
Injury to eyeball . . .	2	1	1	1	...	...	...	...	1	...	...	...	2	...	...	...	...	...
<i>Injuries of the ear—</i>																		
Foreign body . . .	1	1	...	...	1	...	...	...	...	...	...	...	...	1	...	...	...	...
<i>Injuries of the neck—</i>																		
Wound of . . .	10	6	4	1	...	...	2	5	1	1	...	5	3	...	...	...	...	...
Sprain of . . .	1	1	...	...	...	...	...	...	1	...	...	...	...	1	...	...	...	...
<i>Injuries of the chest—</i>																		
Wound of . . .	3	3	...	...	...	1	1	1	...	...	...	1	2	...	...	...	...	...
Contusion of . . .	13	9	4	3	...	1	4	1	2	1	1	1	4	2	...	...	1	...
Fracture of ribs . . .	41	33	8	1	...	2	3	5	15	12	3	9	16	5	...	...	5	1
„ sternum . . .	2	2	...	...	...	...	...	2	...	...	...	1	1	...	...	...	...	...

Injuries.

Duration of residence.								Result.				Remarks.
ys. 1-3	Wks 2-4	Mts. 1-2	Mts. 2-4	Mts. 4-6	Mts. 6-9	Mts. 9-12	Above a year.	C.	R.	U.	D	
...	...	...	1	...	...	...	...	1	...	...	...
6	9	4	11	1	1	...	...	19	10	...	14	
8	11	2	2	...	...	...	...	24	7	...	3	
5	6	...	...	...	...	...	...	14	1	...	...
8	15	1	1	...	...	...	...	30	4	...	...
21	9	4	1	...	...	...	...	54	5	...	...
1	...	...	...	...	...	...	...	...	1	...	3	2 died under 12 hours.
2	...	...	...	...	...	...	...	1	...	...	1	1 died bullet wound.
...	1	1	...	...	...	...	...	2	...	...	...	Trephining in each.
1	2	2	...	...	...	...	...	5	...	...	9	5 lived under 12 hours.
5	3	...	1	...	...	...	...	13	1	...	...
2	...	...	...	...	...	...	...	5	...	...	1	
...	1	...	...	...	...	...	...	1	...	...	...
1	3	...	...	...	...	...	...	3	1	...	...	All compound, 1 fracture of inf. maxilla.
1	...	...	...	...	...	...	...	...	1	...	...
...	...	...	...	...	...	...	...	1	...	...	...	Bilateral, 20 days.
1	...	...	...	...	...	...	...	1	...	...	...	Incised.
1	1	...	...	...	...	...	...	2	...	...	...	1 excision for rupture of globe, 1 prolapse of iris.
1	...	...	...	...	...	...	...	...	1	...	...
1	5	...	2	1	...	...	...	8	1	...	1	Penetrating air passages 5, suicidal 8.
...	1	...	...	...	...	...	...	1	...	...	...	? Displacement of tendon.
2	1	...	...	...	...	...	...	2	1	...	...	All penetrating, punctured 2, bullet 1.
2	2	1	...	...	...	...	...	12	1	...	...	Hæmoptysis 2, emphysema 2, pleurisy 1.
20	8	1	...	...	...	...	...	18	21	...	2	
1	...	1	...	...	...	...	...	2	...	...	...	Pneumonia 1.

TABLE II—

INJURIES.	Total.	Sex.		Ages.								Duration before admission.						
		M.	F.	Under 5	5-10	-20	-30	-40	-50	-60	Above 60	Under 1 hour.	Hrs. 1-6	Hrs. 7-12	Hrs. 13-24	Dys. 1-3	Dys. 3-6	Above 6
LOCAL INJURIES—																		
<i>continued.</i>																		
<i>Injuries of the back—</i>																		
Contusion of . . .	7	5	2	...	...	2	1	3	1	...	...	1	5	1	...	...	...	...
Sprain of . . .	2	2	...	...	...	...	...	1	...	1	...	...	...	...	...	...	2	...
<i>Injuries of the spine—</i>																		
Concussion of . . .	2	2	...	...	...	...	1	1	...	...	...	...	1	1	...	...	...	...
Fracture of . . .	4	4	...	...	...	...	1	1	...	1	1	2	...	...	...	...	1	...
<i>Injuries of the abdomen—</i>																		
Contusion of . . .	27	21	6	1	6	7	8	3	...	2	...	5	16	2	...	3	1	...
Wound of . . .	1	...	1	...	...	...	...	...	...	...	1	...	1	...	...	...	...	...
<i>Injuries of the pelvis—</i>																		
Contusion of . . .	1	1	...	...	1	...	...	...	...	...	...	...	1	...	...	...	...	...
Fractures of . . .	8	8	...	2	2	...	1	2	1	...	...	3	4	...	...	1	...	...
Contusion of buttock .	1	1	...	...	...	...	...	...	...	1	...	1	...	...	...	...	...	...
Wound of „	1	1	...	...	...	...	1	...	...	...	...	1	...	...	...	...	...	...
Contusion of groin . .	2	2	...	...	1	...	...	1	...	...	...	1	1	...	...	...	...	...
„ perinaeum	1	1	...	...	1	...	...	...	...	...	...	...	...	...	1	...	...	...
Wound of „	1	...	1	...	1	...	...	...	...	...	...	1	...	...	...	...	...	...
Contusion of genitals .	1	1	...	...	...	...	...	...	1	...	...	1	3	...	...	...	...	...
Wound of „	4	1	3	...	1	1	...	2	...	...	...	...	1	...	...	...	...	...
UPPER EXTREMITY.																		
Wounds . . .	17	13	4	1	1	8	1	3	3	...	...	4	11	...	...	...	1	1
Contusions . . .	6	4	2	1	1	1	2	...	...	...	1	...	1	3	...	1	...	...
Wound of artery . . .	7	5	2	...	...	3	1	2	1	...	...	5	2	...	...	...	...	...
<i>Dislocation of—</i>																		
Clavicle from stern. .	3	3	...	...	1	2	...	...	...	...	...	2	...	...	...	...	...	...
Humerus . . .	4	2	2	...	...	...	...	...	1	...	3	...	...	2	...	...	...	2
Carpus . . .	1	1	...	...	...	1	...	...	...	...	...	...	2	...	...	...	...	...
Finger . . .	2	2	...	...	1	...	1	...	...	...	...	...	1	...	...	...	...	...
<i>Fracture of—</i>																		
Clavicle . . .	4	3	1	...	1	...	...	1	...	...	2	1	3	...	...	...	...	...
Acromion. . .	1	1	...	...	...	...	...	...	1	...	...	...	1	...	...	...	...	...
Humerus—																		
Simple . . .	6	5	1	2	...	2	...	1	...	1	...	1	2	...	...	...	1	2
Compound . . .	5	5	...	1	1	2	...	...	...	1	...	2	3	...	...	...	...	1
Comp.comminuted	4	4	...	...	...	2	...	1	...	1	...	1	3	...	...	...	...	...
Radius and ulna—																		
Compound . . .	2	2	...	...	...	1	...	1	...	...	...	...	...	2	...	...	...	...
Ununited . . .	1	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	1

continued.

Duration of residence.								Result.				Remarks.
rs.	Wks	Mts.	Mts.	Mts.	Mts.	Mts.	Above a year.	C.	R.	U.	D.	
13	2-4	1-2	2-4	4-6	6-9	9-12						
1	...	...	...	...	...	...	...	6	1	...	...
1	1	...	...	...	...	...	...	2	...	...	...
...	1	1	...	...	...	...	...	1	1	...	...
1	...	...	1	...	...	...	...	1	1	...	2	1 died 3 hours after admission, 1 lived 24 hours, both cervical.
13	7	2	...	...	...	...	...	20	4	...	3	See General Summary.
1	...	...	...	...	...	...	...	...	...	...	1	Suicidal, peritonitis.
1	...	...	...	...	...	...	...	1	...	...	...	Shock.
3	...	1	1	...	...	...	...	2	1	...	5	See General Summary.
...	...	1	...	...	...	...	...	1	...	...	...
...	1	...	...	...	...	...	...	1	...	...	...
1	...	...	...	...	...	...	...	1	1	...	...	1 hæmatoma.
...	...	...	...	...	...	...	...	1	...	...	...	Hæmorrhage from urethra.
...	1	...	...	...	...	...	...	1	...	...	...
...	...	...	...	...	...	...	...	...	1	...	...	Followed by hæmatocele and epididymitis.
1	...	...	...	...	...	...	...	4	...	...	...
3	3	2	2	...	...	...	...	9	8	...	...	3 amputation of fingers, 1 cellulitis.
3	1	...	...	...	...	...	...	4	2	...	...	4 hæmatoma, 2 severe.
3	1	1	...	...	...	...	...	5	2	...	...
2	1	...	...	...	...	...	...	...	3	...	...	1 contusion of back, 1 abdominal injury, 1 fracture of ribs.
1	...	2	...	...	...	...	...	3	...	...	1	All subcoracoid.
1	...	...	...	...	...	...	...	1	...	...	...	Double.
...	1	1	...	...	...	...	...	...	2	...	...	Metacarpophalangeal joint, compound.
...	2	...	...	...	...	...	...	2	2	...	...	1 fracture of ribs, 1 injury to chest.
...	...	...	...	...	...	...	...	...	1	...	...	Contusion.
5	...	...	...	...	...	...	...	6	...	...	...	1 spontaneous ? tumour, 1 impacted.
1	1	1	...	1	...	...	...	3	2	...	...	D. T. 1.
1	1	1	...	...	...	...	...	2	1	...	1	2 amputation.
1	...	1	...	...	...	...	...	2	...	...	...
...	1	...	...	...	...	...	...	...	1	...	...

TABLE II—

INJURIES.	Total.	Sex.		Ages.								Duration before admission.						
		M.	F.	Under 5	5-10	-20	-30	-40	-50	-60	Above 60	Under 1 hour.	Hrs. 1-6	Hrs. 7-12	Hrs. 13-24	Dys. 1-3	Dys. 3-6	Above
UPPER EXTREMITY—																		
<i>continued.</i>																		
Fracture of—																		
Radius, simple	1	1	...	...	...	...	1	...	...	...	...	...	1	...	...	...	...	...
Ulna	3	3	...	...	...	...	1	1	...	...	1	...	1	...	...	...	...	...
Hand and fingers, comp. and comm. . .	16	14	2	2	3	2	4	1	2	1	1	5	8	...	...	...	...	...
LOWER EXTREMITY.																		
<i>Wounds of—</i>																		
Thigh	7	5	2	1	...	2	4	...	...	...	...	1	4	...	...	...	...	...
Leg	5	3	2	...	...	1	1	1	...	...	2	2	3	...	...	...	...	...
Knee	4	2	2	1	...	2	...	...	...	1	...	1	3	...	...	...	...	...
Foot	5	4	1	...	1	1	2	...	...	1	...	...	3	...	...	...	...	...
<i>Contusion of—</i>																		
Hip	7	5	2	...	...	1	...	...	...	3	3	3	3	...	...	...	1	...
Thigh	6	5	1	4	...	...	1	1	...	...	...	1	4	...	...	...	...	...
Leg	8	6	2	1	2	1	1	2	1	...	...	4	4	...	...	...	...	...
Foot	8	7	1	1	1	3	...	1	1	1	...	3	4	...	...	1	...	...
<i>Dislocation of—</i>																		
Femur	5	5	...	1	4	...	...	...	...	...	...	2	1	...	...	...	...	...
Head of fibula	1	1	...	...	...	...	...	1	...	...	...	...	1	...	...	...	...	...
Astragalus	1	1	...	...	...	...	...	1	...	...	...	1	...	...	...	...	...	...
Foot	1	1	...	...	...	1	...	...	...	...	...	...	1	...	...	...	...	...
Toe	1	1	...	...	...	...	...	1	...	...	...	...	1	...	...	...	...	...
<i>Fracture of femur—</i>																		
Simple	57	48	9	23	10	6	1	3	8	2	4	14	34	1	...	1	...	...
Comminuted	2	2	...	1	...	...	...	1	...	...	...	1	1	...	...	...	...	...
Compound	2	2	...	...	...	...	...	...	1	...	1	...	1	...	...	1	...	...
Comp. comminuted	4	4	...	1	...	1	1	...	1	...	...	1	2	...	...	1	...	...
Neck of femur	15	2	13	...	...	...	1	...	2	6	6	2	7	1	...	1	...	...
<i>Fracture of tibia—</i>																		
Simple	39	32	7	9	7	8	2	6	4	2	1	16	23	...	...	4	...	...
Compound	3	3	...	...	...	...	1	2	...	...	...	2	1	...	...	...	...	...
Comminuted	1	...	1	...	...	...	...	...	...	...	1	...	1	...	...	...	...	...
Comp. comminuted	3	3	...	...	...	1	1	...	1	...	...	1	2	...	...	...	...	...
<i>Fracture of fibula—</i>																		
Simple	31	26	5	...	2	1	10	6	6	5	1	} 9	30	1	2	4	1	...
With rupture of int ^l . lat ^l . lig.	16	13	3	...	...	...	5	4	4	1	2							

continued.

Duration of residence.								Result.				Remarks.
Dys. 5-13	Wks 2-4	Mts 1-2	Mts. 2-4	Mts. 4-6	Mts 6-9	Mts. 9-12	Above a year.	C.	R.	U.	D.	
...	...	1	...	...	...	...	...	1	...	...	...	Double Colles' concussion.
1	...	1	1	...	...	...	...	2	1	...	...	3 olecranon, 1 ununited cured by operation.
4	9	1	...	...	...	...	...	14	2	...	...	Amputation fingers 7, amputation arm 2, tendon torn out 1.
...	4	1	1	...	...	...	...	7	...	...	...	1 gunshot, 1 D. T.
3	...	1	1	...	...	...	...	5	...	...	...
...	4	...	...	...	...	...	...	4	...	...	...
1	3	...	...	...	...	...	...	4	1	...	...	Needle lodged 2, glass 1.
3	2	...	...	...	...	...	...	6	1	...	...	Rheumatoid arthritis 1.
1	...	...	...	...	...	...	...	4	2	...	...
3	...	...	...	...	...	...	...	6	2	...	...	1 D. T.
3	3	1	...	...	...	...	...	8	...	...	...	Hæmatoma 4, followed by slough 3.
2	...	...	1	...	...	...	...	3	2	...	...	1 pubic, 2 ? congenital.
1	...	...	...	...	...	...	...	1	...	...	...	Forwards.
1	...	...	...	...	...	...	...	1	...	...	...
1	...	...	...	...	...	...	...	1	...	...	...	Partial, backwards.
...	...	1	...	...	...	...	...	1	...	...	...
3	10	28	5	8	...	...	...	49	5	...	3	D. pulmonary embolism, hypostatic congestion, delirium.
...	...	...	1	1	...	...	...	2	...	...	...	1 scalp wound.
1	...	...	1	...	...	...	...	1	...	...	1	Fracture of other leg, gangrene.
...	...	...	...	1	...	...	...	1	...	...	3	Amputation of thigh 2, shock, 1 D.
...	...	...	8	5	...	...	...	13	...	2	...	1 with fracture of radius.
16	13	1	1	1	...	...	...	14	25	...	...	Ununited 3.
...	1	1	1	...	...	...	...	3	...	...	...	Erysipelas 1, D. T. 1.
...	...	1	...	...	...	...	...	1	...	...	...	Upper third.
...	1	1	1	...	...	...	...	3	...	...	...	Secondary amputation 1, fracture of ribs 1.
22	6	1	...	...	...	...	...	8	23	...	...	Dislocation of foot 2, synovitis knee 1.
2	13	...	...	...	...	...	...	10	6	...	...	General contusions 1.

continued.

Duration of residence.									Result.				Remarks.
s.	Dys.	Wks	Mts	Mts.	Mts.	Mts.	Mts	Above	C.	R.	U.	D.	
4-5-13	2-4	1-2	2-4	4-6	6-9	9-12		a year.					
4	22	28	13	...	...	...	...	...	26	40	...	1	1 dislocation of head of fibula and rupture of quadriceps tendon, 2 delayed union.
...	1	1	1	...	...	...	...	...	1	2	...	...
...	...	4	6	3	...	...	...	...	13	...	...	...	Into ankle joint 1.
2	...	1	5	1	...	...	...	...	5	1	...	3	Primary amputation 3, pyæmia after amputation 1, both legs, D. shock 1.
...	...	1	2	5	11	...	...	...	19	...	...	...	Muscular action 18, direct violence 1.
...	...	1	...	...	...	...	...	...	...	1	...	...	Pain in joint for 14 days before rupture.
...	1	...	...	...	...	...	...	...	...	1	...	...
...	1	1	...	...	1	...	...	...	1	2	...	...	Compound 1.
2	...	2	1	...	...	...	...	...	3	2	...	...
...	2	...	...	1	1	...	...	...	4	...	...	...	Amputation of leg (double) 1, Syme's 1, amputation of toe 1.
...	2	...	1	1	...	...	...	...	4	...	...	...	Needle 1, lacerated and contused 1, incised 1, punctured 1.
...	2	...	...	...	...	...	...	...	...	2	...	...
...	1	...	...	...	...	...	...	...	1	...	...	...	With rupture of tendons of forearm and contusion.
...	1	1	...	...	...	...	...	...	...	2	...	...	Rheumatoid arthritis 1.
...	20	7	2	1	...	...	...	...	28	1	...	1	Followed by suppuration 1, wound over joint 2.
5	2	1	...	...	...	...	...	...	4	4	...	...	Rupture of ligament 1.
7	2	3	...	...	...	...	...	...	...	12	...	...	Enteric fever 1, rheumatism 2, gout, jaundice, hemiplegia, hysteria, suppression of urine, ascites, œdema of lower extremities, &c.
...	...	...	...	...	...	...	...	...	...	2	...	...
...	...	...	...	...	...	...	...	...	...	18	7	...	Alcoholism, senectus, old amputation, for readjustment of splints, &c.
...	...	...	...	...	...	...	...	...	126	89	18	2	
...	...	...	...	...	...	...	...	...	...	...	...	13	
									1457	662	47	163	
									2329				

TABLE III.—

SURGICAL OPERATIONS.	Sex.		Ages.						
	M.	F.	Under 5	5-10	-20	-30	-40	-50	-60
REMOVAL OF TUMOURS AND GROWTHS.									
Amputation of breast . . . . .	...	24	...	...	...	...	5	7	5
Ditto with removal of glands . . . . .	...	10	...	...	...	...	2	6	1
Removal of recurrent growth . . . . .	...	3	...	...	...	...	1	2	...
„ axillary glands . . . . .	...	3	...	...	...	...	...	3	...
„ inguinal glands . . . . .	...	2	...	...	...	...	...	...	...
For epithelioma of tongue	4	...	...	...	...	...	...	1	2
„ lip	7	...	...	...	...	...	...	2	2
„ mouth	2	...	...	...	...	...	2	...	...
„ genitals	1	1	...	...	...	...	1	...	...
„ lower extremity	4	...	...	...	...	...	...	4	...
For sarcoma of palate . . . . .	...	1	...	...	...	...	...	1	...
„ jaw	2	1	...	1	1	...	...	...	1
„ parotid region . . . . .	...	1	...	...	...	...	...	1	...
„ testes	2	...	...	...	...	1	1	...	...
„ lower extremity . . . . .	...	4	...	...	...	...	...	2	...
For adenoma of breast . . . . .	...	8	...	...	...	5	3	...	...
For lipoma	4	8	...	...	1	2	5	2	1
For papilloma . . . . .	...	1	...	...	...	1	...	...	...
For fibroma	2	2	...	...	...	1	1	2	...
For angioma . . . . .	...	1	...	...	1	...	...	...	...
For exostosis	1	2	...	...	3	...	...	...	...
For lymphoma . . . . .	...	3	...	...	1	2	...	...	...
For molluscum . . . . .	...	1	...	...	1	...	...	...	...
For nævus vascularis	1	4	4	1	...	...	...	...	...
For rodent ulcer	1	2	...	...	...	...	...	2	1
For lupus . . . . .	...	2	...	...	1	...	1	...	...
For keloid	1	...	...	...	...	1	...	...	...
For myofibroma of uterus . . . . .	...	2	...	...	...	...	2	...	...
For cystic disease of ovary . . . . .	...	17	...	...	...	5	4	5	3
For sebaceous cysts . . . . .	...	2	...	...	...	1	...	1	...
For various cysts	4	2	1	...	..	1	1	2	1
For polypus of rectum . . . . .	...	1	...	...	...	1	...	...	...
CIRCULATORY SYSTEM.									
Ligature of subclavian artery . . . . .	...	1	...	...	...	...	...	...	...
„ external iliac	1	...	...	...	...	...	...	...	1
„ common carotid	1	...	...	...	...	...	1	...	...
„ radial	3	...	...	...	1	1	1	...	...
„ ulnar	3	1	...	...	1	2	1	...	...
„ popliteal	1	...	...	...	...	...	1	...	...
„ lingual	1	...	...	...	...	...	1	...	...
Obliteration of varicose veins	1	1	...	...	...	1	...	...	...

Surgical Operations.

Duration of residence after operation.									Result.				Remarks.
4 days.	Dys. 5-13	Wks 2-4	Mts. 1-2	Mts. 2-4	Mts. 4-6	Mts. 6-9	Mts. 9-12	Above a year.	C.	R.	U.	D	
		17	7	...	...	...	...	...	24	...	...	...
		5	5	...	...	...	...	...	7	1	...	2	Hæmorrhage 1, internal deposit 1.
		2	1	...	...	...	...	...	3	...	...	...	Breast.
	1	2	...	...	...	...	...	...	3	...	...	...	Scirrhus.
		2	...	...	...	...	...	...	2	...	...	...	Secondary to epithelioma of penis.
1		2	1	...	...	...	...	...	2	1	...	1	Hæmorrhage.
	6	1	...	...	...	...	...	...	7	...	...	...	Upper lip 1.
1		...	...	...	...	1	...	...	...	1	...	1	Same case; died after removal of tongue.
		2	...	...	...	...	...	...	1	1	...	...	Anus and vulva 1, amputation penis 1.
		1	1	2	...	...	...	...	...	4	...	...	Same case, scraped. (See Amputation for Disease).
		1	...	...	...	...	...	...	1	...	...	...	Recurrent; soft palate.
	2	1	...	...	...	...	...	...	2	1	...	...	Upper jaw 1, lower 2.
		1	...	...	...	...	...	...	...	...	...	1	Extension of growth to meninges; convulsions.
	1	...	1	...	...	...	...	...	...	1	...	1	Peritonitis.
			2	2	...	...	...	...	2	2	...	...	2 cases, each 2 operations.
	3	5	...	...	...	...	...	...	8	...	...	...
	5	5	1	1	...	...	...	...	12	...	...	...
		1	...	...	...	...	...	...	1	...	...	...	Congenital of scalp.
1		2	1	...	...	...	...	...	4	...	...	...
		1	...	...	...	...	...	...	1	...	...	...	Cheek; excision.
	2	1	...	...	...	...	...	...	3	...	...	...	Toes 2, humerus 1.
	1	2	...	...	...	...	...	...	3	...	...	...
			1	...	...	...	...	...	1	...	...	...	Hairy and pigmented.
1	1	3	...	...	...	...	...	...	2	3	...	...	Nose, 2 operations by electrolysis; ditto finger 1.
	1	2	...	...	...	...	...	...	3	...	...	...	Caustics 1, excision 2, plastic operation in 1.
		2	...	...	...	...	...	...	...	2	...	...	Scraping, caustics.
	1	...	...	...	...	...	...	...	1	...	...	...	Excision.
2		...	...	...	...	...	...	...	...	...	...	2	
2	2	4	6	3	...	...	...	...	13	...	...	4	All antiseptic precautions.
1	1	...	...	...	...	...	...	...	2	...	...	...	Arm 1, neck 1.
	1	3	2	...	...	...	...	...	6	...	...	...	Hydatid of liver 1, dermoid 1, of chest 1,
													neck 1, spermatic cord 2.
	1	...	...	...	...	...	...	...	1	...	...	...
				1	...	...	...	...	1	...	...	...	3rd part; aneurism.
					1	...	...	...	1	...	...	...	Aneurism in groin.
		1	...	...	...	...	...	...	...	1	...	...	Followed by suppuration of vitreous on same
													side, secondary hæmorrhage, and ligature of
													lingual artery in the wound.
1		1	...	1	...	...	...	...	2	1	...	...	Wound 2, after burn 1.
	2	...	1	1	...	...	...	...	2	2	...	...	Wound 3, after burn 1.
		1	...	...	...	...	...	...	1	...	...	...	Secondary hæmorrhage after amputation.
		1	...	...	...	...	...	...	...	...	...	1	Secondary hæmorrhage, wound. (<i>Vide</i> Common
													Carotid).
		1	...	1	...	...	...	...	2	...	...	...	Excision 1, ligature 1.

TABLE III—

SURGICAL OPERATIONS.	Sex.		Ages.							
	M.	F.	Under 10	5-10	-20	-30	-40	-50	-60	Above
CIRCULATORY SYSTEM—<i>continued.</i>										
Plugging nares for epistaxis	2	1	...	...	1	...	...	...	1	...
Venesection	4	1	...	...	1	3	1	...	...	...
RESPIRATORY SYSTEM.										
Tracheotomy	3	2	3	1	...	...	...	...	1	...
Laryngotomy	1	...	...	...	1	...	...	...	...	...
DUCTLESS GLANDS.										
Removal of thyroid	1	...	...	...	1	...	...	...	...	...
DIGESTIVE SYSTEM.										
Excision of tonsils . . . . .	...	3	...	1	1	1	...	...	...	...
Strangulated inguinal hernia	18	...	4	...	1	1	3	5	1	...
„ femoral hernia	5	9	...	...	...	1	3	5	1	...
„ umbilical hernia . . . . .	...	1	...	...	...	...	...	1	...	...
Abdominal section	3	1	...	1	...	...	2	1	...	...
Artificial anus	5	2	2	...	...	1	1	2	1	...
Imperforate anus	2	...	2	...	...	...	...	...	...	...
Division of fistula in ano	12	6	...	...	4	6	3	5	...	...
Removal of hæmorrhoids	10	3	...	...	...	...	5	4	4	...
Fissure of anus . . . . .	...	2	...	...	...	1	...	10	...	...
Division of stricture of rectum . . . . .	...	3	...	...	1	1	1	...	...	...
GENITO-URINARY SYSTEM.										
For phimosis	11	...	3	...	4	3	...	...	1	...
For paraphimosis	2	...	1	...	...	1	...	...	...	...
For hydrocele	7	...	...	...	...	2	3	1	...	...
For varicocele	1	...	...	...	...	...	1	...	...	...
For ruptured perinæum . . . . .	...	3	...	...	1	2	...	...	...	...
For removal of warts	4	9	...	...	9	4	...	...	...	...
Puncture above pubes	6	...	...	...	...	...	...	1	5	...
Internal urethrotomy	9	...	...	...	...	1	4	3	...	...
Perineal section	5	...	...	...	...	...	3	...	...	...
„ puncture	4	...	...	...	...	...	...	2	1	...
Extraction of foreign body	1	...	...	...	...	1	...	...	...	...
Calculus of bladder	2	1	...	1	...	...	1	1	...	...
„ urethra	1	...	1	...	...	...	...	...	...	...
„ kidney . . . . .	...	1	...	...	...	...	1	...	...	...
Castration	5	...	1	...	1	2	1	...	...	...

continued.

Duration of residence after operation.								Result.				Remarks.
Dys. 5-13	Wks 2-4	Mts. 1-2	Mts. 2-4	Mts. 4-6	Mts. 6-9	Mts. 9-12	Above a year.	C.	R.	U.	D.	
1	1	...	...	...	...	...	...	3	...	...	...	In 2 cases of fractured skull, performed twice with relief, 1 before removal of thyroid.
...	...	...	...	...	...	...	...	...	3	...	2	
...	2	1	...	1	...	...	...	4	...	...	1	Bronchocele 1, punctured wounds trachea 1, scald 1.
1	...	...	...	...	...	...	...	1	...	...	...	Fish bone.
...	...	...	...	...	...	...	...	...	...	...	1	<i>Vide</i> Tracheotomy and Venesection.
...	...	3	...	...	...	...	...	3	...	...	...	1 also operation for cleft palate.
2	6	4	1	...	...	...	...	10	...	...	8	Extraperitoneal 2.
1	4	3	3	...	...	...	...	9	...	...	5	Erysipelas 1.
...	1	...	...	...	...	...	...	1	...	...	...	...
...	...	2	...	...	...	...	...	1	1	...	2	1 exploratory, afterwards colotomy; 2 extension of hernial incision, ultimately fatal.
...	1	4	...	2	...	...	...	1	3	...	3	Colotomy 5, Littre's operation 2.
...	1	1	...	...	...	...	...	...	...	2	...	Afterwards Littre's operation.
8	8	1	...	...	...	...	...	16	2	...	...	1 operation for lipoma.
7	6	...	...	...	...	...	...	13	...	...	...	Clamp and cautery 11, ligature 2.
...	1	1	...	...	...	...	...	1	1	...	...	1 also operation for hæmorrhoids.
...	...	2	1	...	...	...	...	2	1	...	...	...
5	4	1	...	...	...	...	...	11	...	...	...	Circumcision 9, incision 2, before application of caustic to sore.
2	...	...	...	...	...	...	...	2	...	...	...	Also for warts.
2	3	...	...	...	...	...	...	4	3	...	...	Tapping with injection of iodine 3, simple tapping 3, incision 1, 1 twoappings.
...	1	...	...	...	...	...	...	1	...	...	...	...
...	...	2	1	...	...	...	...	...	3	...	...	...
2	4	5	2	...	...	...	...	8	5	...	...	5 two operations, 1 also circumcision.
...	1	...	5	...	...	...	...	...	6	...	...	5 in same patient.
5	1	2	...	...	...	...	...	8	...	...	1	1 also extraction of foreign body.
2	...	1	2	...	...	...	...	3	...	...	2	2 for extravasation of urine.
...	2	1	1	...	...	...	...	2	1	...	1	After suprapubic puncture.
...	1	...	...	...	...	...	...	1	...	...	...	Guide of urethrotome.
...	1	1	...	...	...	...	...	2	...	...	1	Lateral lithotomy 2, dilatation of urethra 1.
...	1	...	...	...	...	...	...	1	...	...	...	Perineal section.
...	...	...	2	1	...	...	...	1	...	...	...	Nephrotomy.
1	1	2	...	...	...	...	...	1	2	...	2	1 also operation for hernia, sarcoma 2, painful retained testis 1, syphilitic testis 1.

TABLE III—

SURGICAL OPERATIONS.	Sex.		Ages.								Above
	M.	F.	Under 5	5-10	-20	-30	-40	-50	-60		
LOCOMOTORY SYSTEM.											
Subcutaneous division of femur . . .	4	6	...	1	7	2	...	...	...	...
" " tibia . . .	3	3	5	...	1	...	...	...	...	...
Trephining of skull . . .	2	...	...	...	...	1	...	...	...	1
" femur . . .	1	...	...	...	1	...	...	...	...	...
" tibia . . .	1	...	...	1	...	...	...	...	...	...
Linear osteotomy . . .	1	1	...	...	2	...	...	...	...	...
For ununited fracture . . .	2	...	1	...	...	1	...	...	...	...
Excision of portion of rib . . .	1	...	...	...	...	1	...	...	...	...
Removal of bone in compound fracture . . .	5	...	...	1	...	3	1	...	...	...
Removal of necrosed bone from—											
Jaw . . .	2	1	1	...	...	...	1	1	...	...
Humerus . . .	2	...	...	1	1	...	...	...	...	...
Ulna . . .	1	...	...	...	...	1	...	...	...	...
Ilium . . .	1	...	...	1	...	...	...	...	...	...
Femur . . .	4	3	1	2	4	...	...	...	...	...
Tibia . . .	15	...	2	..	7	1	1	2	2	...	
Fibula . . .	1	...	1	...	...	...	...	...	...	...
Os calcis . . .	2	2	...	1	2	1	...	...	...	...
Other bones of foot . . .	2	3	1	...	3	...	...	..	...	...
Caries of—											
Tarsus . . .	1	...	...	1	...	...	...	...	...	...
Carpus . . .	1	...	...	...	...	...	...	1	...	...
Other bones . . .	2	2	1	...	2	..	...	1	...	...
Excision of—											
Elbow . . .	1	...	...	...	...	1	...	...	...	...
Hip . . .	7	7	5	3	4	2	...	...	...	...
Knee . . .	4	1	...	1	3	1	...	...	...	...
Ankle . . .	1	...	...	...	...	1	...	...	...	...
Forcible flexion of knee . . .	1	1	...	...	...	2	...	...	...	...
Incision into hip-joint . . .	1	...	...	...	1	...	...	...	...	...
" knee . . .	2	3	3	...	...	...	1	1	...	...
Removal of loose bodies . . .	1	1	...	...	1	1	...	...	...	...
Scraping of shoulder-joint . . .	1	1	...	...	...	2	...	...	...	...
" knee . . .	1	1	...	1	...	1	...	...	...	...
" ankle . . .	...	1	1	...	...	...	...	...	...	...
Tapping in disease of hip . . .	10	...	...	3	2	1	...	...	...	...
" " knee . . .	5	2	...	...	1	2	...	1	3	...
For ganglion of wrist . . .	1	2	...	...	2	1	...	...	...	...
Reduction of dislocation—											
Of lower jaw . . .	1	...	...	...	...	...	1	...	...	...
Of humerus . . .	2	2	...	...	...	...	...	1	...	...
Of carpus . . .	2	...	...	...	2	...	...	...	...	...
Of femur . . .	2	...	...	2	...	...	...	...	...	...
Of head of fibula . . .	2	...	...	...	...	...	2	...	...	...
Of astragalus . . .	1	...	...	...	...	...	1	...	...	...
Amputation of fingers . . .	27	1	5	5	5	6	...	3	3	...	

continued.

Duration of residence after operation.								Result.				Remarks.
ys.	Wks	Mts.	Mts.	Mts.	Mts.	Mts.	Above	C.	R.	U.	D.	
-13	2-4	1-2	2-4	4-6	6-9	9-12	a year.					
...	...	3	7	...	...	...	...	10	...	...	...	Neck 1, below trochanter major 1, for genu valgum 5 (double 1), varum 3.
...	...	3	2	...	1	...	...	4	2	...	...	Also of femur 1, double 2, circumcision 1.
...	1	1	...	...	...	...	...	2	...	...	...	Depressed fracture of vault.
...	1	...	...	...	...	...	...	1	...	...	1	Osteomyelitis.
...	1	...	...	...	...	...	...	1	...	...	...	Chronic abscess.
...	...	1	...	...	...	...	...	1	...	...	1	Tibia for ? ostitis, ostitis ulna.
...	...	1	...	1	...	...	...	1	...	...	...
...	...	...	...	...	...	...	1	...	1	...	...	Empyema and spinal disease.
1	...	1	1	...	...	...	...	1	2	...	2	Skull 2.
1	...	1	...	...	...	...	...	2	1	...	...
...	1	...	1	...	...	...	...	1	1	...	...
...	1	...	...	...	...	...	...	1	...	...	...
...	...	...	1	...	...	...	...	1	...	...	...
1	...	1	2	1	1	...	...	4	2	...	1	1 two operations.
...	3	2	4	1	1	2	2	9	6	...	...	2 cases two operations, 1 case four operations.
...	...	...	1	...	...	...	...	1	...	...	...
...	2	2	...	...	...	...	...	3	...	...	1	Erysipelas and miscarriage 1.
1	1	2	1	...	...	...	...	4	1	...	...	1 also necrosis of humerus.
...	...	...	1	...	...	...	...	...	1	...	...
...	...	1	...	...	...	...	...	...	1	...	...
...	...	1	2	1	...	...	...	2	2	...	...	Ulna 1, tibia 3, 1 two operations.
...	...	...	1	...	...	...	...	1	...	...	...	Partial.
...	...	1	3	3	7	...	...	10	1	...	3	Aspiration in 2.
...	...	...	2	1	...	...	...	4	...	...	1	Died of shock.
...	...	...	...	1	...	...	...	1	...	...	...
1	...	1	...	...	...	...	...	...	2	...	...
...	...	...	1	...	...	...	...	...	1	...	...	Afterwards excision, acute.
1	...	...	4	...	...	...	...	1	2	...	2	Suppuration in joint; 1 died after sequestro-
...	...	2	...	...	...	...	...	2	...	...	...	tomy.
...	...	...	1	...	1	...	...	...	2	...	...	Knee.
...	...	...	...	2	...	...	...	...	2	...	...	Afterwards excision 1, amputation 1.
...	...	1	...	...	...	...	...	...	1	...	...	Scarlatina.
...	...	1	5	3	1	...	...	3	7	...	...	2 aspirated three times, 1 twice.
...	2	3	...	2	...	...	...	3	4	...	...	Aspirated twice 1, refused amputation 1.
1	1	...	1	...	...	...	...	2	1	...	...	Compound 1, removal 1.
...	...	...	...	...	...	...	...	1	...	...	...	Bilateral.
1	...	2	...	...	...	...	...	2	1	...	1	
2	...	...	...	...	...	...	...	2	...	...	...	Double.
2	...	...	...	...	...	...	...	2	...	...	...
1	...	1	...	...	...	...	...	2	...	...	...
1	...	...	...	...	...	...	...	1	...	...	...
8	11	6	...	...	...	...	...	...	24	4	...	Primary and secondary.

continued.

Duration of residence after operation.								Result.				Remarks.
Wks.	Mts.	Mts.	Mts.	Mts.	Mts.	Above		C.	R.	U.	D.	
2-4	1-2	2-4	4-6	6-9	9-12	a year.						
...	2	1	...	...	...	...	...	3	...	...	1	
...	1	...	...	...	...	...	...	1	...	...	4	
...	2	2	2	...	...	...	...	5	1	...	...	1 double amputation and reamputation.
...	...	...	1	...	...	...	...	1	...	...	...	Pirogoff.
1	...	1	...	...	...	...	...	1	...	...	1	After amputation of leg 1.
...	2	1	1	...	...	...	...	3	1	...	...	Also amputation of thigh, 1 reamputation.
2	...	...	...	...	...	...	...	2	...	...	...	Disease of wrist 2.
3	3	1	...	...	...	...	...	7	...	...	...	Gangrene 1, erysipelas 1.
...	1	13	...	...	1	...	...	13	...	...	2	Sarcoma of femur 2.
...	2	2	...	...	...	...	...	3	1	...	...	Epithelioma of leg 1, disease of ankle 1.
1	1	...	1	...	...	...	...	2	...	...	...	Syme's amputation.
1	2	1	1	...	...	...	...	5	...	...	...
1	...	...	1	1	1	1	1	2	3	...	...	In 1 four operations.
4	...	2	...	...	...	...	...	6	...	...	1	Also operation on palate 2.
...	5	4	1	...	...	...	...	11	4	...	...	1 excision tonsils, 1 harelip.
...	2	2	...	...	...	...	...	...	4	...	...	4 operations, same child.
1	2	1	1	1	...	...	...	4	4	...	...	5 rhinoplastic, 2 two operations.
...	...	1	...	...	...	...	...	1	...	...	...	Ulnar.
5	9	5	2	...	...	...	...	14	8	...	...	6 cases, two operations each.
1	1	1	1	...	...	...	...	3	1	...	...	1 case two operations.
...	1	3	...	...	...	...	...	2	2	...	...	Tendo-Achill. 3, ext. long. pollic. 1.
...	1	...	...	...	...	...	...	1	...	...	...
...	1	...	...	...	...	...	...	...	1	...	...
1	...	1	...	...	...	...	...	2	...	...	...	Ruptured globe 1, burn 1.
3	2	...	...	...	...	...	...	2	3	...	...	Incision 1, tapping 2, removal 2.
2	2	1	...	...	...	...	...	6	...	...	...	Bullet 2, needle 2, glass 1, shot 1.
2	1	1	...	...	...	...	...	...	3	...	1	Scirrhus; ascites, 1 case three tapplings.
1	1	...	...	...	...	...	...	...	2	...	...	Ultimately died, sarcoma of lung.
...	1	6	3	1	...	...	...	1	11	...	...	Tapped eight times 1, others readmissions of a case, each for hydronephrosis.
1	2	3	...	...	...	...	...	6	...	...	...
								450	150	...	65	
								665				

SUMMARY OF DISEASES.

GENERAL DISEASES.

Erysipelas (arising).—35. C. 27, R. 2, D. 6. 33 cases arose in the wards, of which 21 were males, 12 females; 2 cases of facial erysipelas occurred in nurses (see Special Table III.—Erysipelas).

Erysipelas (admitted as such).—69. C. 63, D. 6. 52 males, 17 females; of these 5 were cellulo-cutaneous, and 3 died; 2 cases were followed by multiple subcutaneous abscesses, in one of which the eruption wandered all over the trunk and extremities; both recovered.

Pyæmia.—(See Special Table II.—Pyæmia.)

Syphilis—

1. *Primary* by—

a. Indurated chancre.—Males 2, females 6. C. 4, R. 4. With eruption 4; gonorrhœa 5; warts 1; 1 admitted for hæmorrhage from sloughing sore, which afterwards became indurated.

2. *Secondary*.—C. 33, R. 12. Males 2, females 43. Manifested by the following symptoms—Condylomata 16; ulceration of tonsils 14; fissures of tongue 1; lips 1; anus 1; sores about genitals 20; Eruptions: acne 2; psoriasis 14; lichen 1; rupia 2; other varieties 10; iritis 2; conjunctivitis 2. Complications: gonorrhœa 36; œdema of labia 12; warts 5; buboes 2; marked glandular enlargement 9; tonsillitis 3; abscesses 2; anæmia 1; hysteria 1; ptyalism 1; hæmorrhoids 5; scabies 5.

2. *Tertiary*.—C. 4, R. 1. Males 3, females 2. Males, 1 ulceration of glans penis, readmitted, 1 ulceration of nose and face. Females, 1 ulceration of hard palate and calf of leg, 1 ulceration of nose and tongue.

LOCAL DISEASES.

TUMOURS.

Carcinomata.

Scirrhus of—

a. Breast.—C. 28, R. 4, U. 3, D. 3. 3 refused operation; 4 disease too extensive; in 5 family history of cancer; 1 of phthisis; ? cause, injury to breast in

6; gathered nipple 1; abscess of breast 6; 1 preceded, for eighteen years, by discharge from nipple; parturition 1; in this case there was internal deposit, ascites. Breast only affected in 22, remainder some glandular enlargement. Of fatal cases after operation, 1 hæmorrhage, 1 internal deposit, in each glandular affection.

b. Breast (recurrent).—C. 2. Recurred in cicatrix—period between operation and recurrence of growth, æt. 33, 2 months; æt. 50, 18 months; in this case the axillary glands had been removed twice during period of 2 years.

c. Axillary glands.—C. 3, R. 1. 1 æt. 48, free from disease 2 months. 1 æt. 49, free 6 months. Glands not affected before first operation in either. 2 æt. 50, recurrent.

d. Rectum.—R. 1, U. 1, D. 2. In 2 colotomy was performed, affording much relief; 1 died of peritonitis, from ulceration above stricture; 1 relieved by morphia.

Encephaloid.—C. 2.

Breast.—No history of cancer; growth 4 months; fungating; no involvement of glands; removal; readmitted a month afterwards for recurrence in cicatrix of 14 days' growth; removal.

Epithelioma.

a. Tongue.—C. 2, R. 6, U. 2, D. 1. 1 recurrent; 1 involved lower lip, and was too extensive for removal; 1 floor of mouth involved, here anterior portion of inferior maxilla removed with anterior two thirds of tongue; died 4 days afterwards from hæmorrhage; 4 cases growth removed with galvano-cautery; in 8 distinct enlargement of submaxillary glands.

b. Lip.—C. 6, R. 1. Removal in each case; slight glandular enlargement in 1; recurrent 2, one of upper lip, involving whole lip, alæ of nose and cheek, 16 months' growth; extensive lupoid scars of face. Disease of lower lip treated by usual V-shaped incision.

c. Mouth.—R. 3, D. 1. Hard palate 1, refused operation; lower jaw and cheek 3; 1 recurrent, 5 months; 1st operation, removal of part of inferior maxilla; 2nd, removal of anterior two thirds of tongue and scraping of recurrent growth, erysipelas; died after residence 8 months.

d. Nose.—R. 1, D. 1. Commenced 2 years before; readmission; died 25 days; nasal, ethmoid, and superior maxilla affected; cystic kidneys; valvular disease of heart.

e. Lower extremity.—C. 1, R. 2. Recurrent 2; 1, 8 months, of thigh, extensive, treated by scraping; 1, after removal of little toe, 2 months; 1, 8 months, ulceration of leg, amputation below knee, enlargement of gland in groin, which he refused to have removed.

f. Glands.—C. 2, R. 1. Axillary enlargement 2 months, a growth removed from forearm in position of old scar 5 months ago; marked cachexia; extensive involvement of axilla; 2, same patient, right groin after removal of epithelioma of penis, each time one gland removed of 2 and 3 months' growth respectively.

g. Œsophagus.—D. 1. Female, æt. 46; 5 months, dysphagia, loss of flesh; nutritive enemata. Communicated with trachea by a small aperture.

h. Rectum.—R. 3, U. 1. Anus chiefly involved and ascites 1; in 1 growth presented microscopical characters of cylindroma; 1 colotomy.

i. Genitals.—C. 1, R. 1, D. 1. Æt. 48, penis, removed by knife and galvanocautery. Æt. 64, commenced in perineal fistula and involved genital organs partially; removed twice before, now too extensive. Æt. 38; 12 months, vulva and perinæum, greater part removed by knife, hæmorrhage controlled by ligature and thermo-cautery.

Sarcomata.

a. Palate.—C. 1, R. 1. Females, each recurrent, one myeloid after removal $4\frac{1}{2}$ years previously, the other, spindle-celled of soft palate, after removal 18 months before; removed.

b. Upper jaw.—U. 1, D. 1. Males, æt. 63, commenced with discharge from nostril $3\frac{1}{2}$ months before; exophthalmos and much swelling of right side of face, with large opening in right molar region of mouth, too extensive for operation; died. Æt. 58, commenced with obstruction of left nasal duct; slight exophthalmos, lachrymation, swelling below eye; operation not recommended.

c. Lower jaw.—C. 2. Males, æt. 7 and 11. Small myeloid epulis in each; removed.

d. Frontal.—R. 1. Female, æt. 40, 16 months' duration; large growth fungating through two small openings; no operation.

e. Neck.—R. 1, D. 1. Male, æt. 27, began as glandular painful enlargement after sore throat; when admitted involved most of left side of neck, suppuration, incision, ultimately formed large fungating sore. Had attack of erysipelas, recovered from that, but died from exhaustion. Female, æt. 34, removed 5 months before, recurrent in cicatrix and glands, ulceration over mid line of neck, from which occasional hæmorrhage; growth large; relieved.

f. Chest wall.—U. 1. Female, 7 months' growth, under right scapula.

g. Parotid region.—R. 2, D. 1. Female, æt. 44, sarcoma of parotid region removed 13 months; small fungating growth from right ear. Readmitted; growth partly removed; died from convulsions, due to growth in dura mater 3 weeks afterwards. Male, æt. 27, melanotic, commencing after removal of growth from forehead 4 months previously; extensive, with facial paralysis and deafness.

h. Breast.—C. 1. Fasciculated sarcoma; 6 months' growth; amputation.

i. Testis.—R. 1, D. 1. Æt. 23, R.; castration; tumour partly cystic, composed of small round cells; afterwards readmitted to medical side with recurrent growths in lungs. Æt. 36, D.; 8 months' growth in retained testis, right groin, sac of hernia opened during removal, peritonitis, growth round cells, fairly uniform in size.

k. Lower extremity.—C. 2, R. 1, D. 2. All females. Æt. 35, amputation of thigh for disease of lower end of femur, 18 months' duration, recurred in stump

and lungs; round-celled. *Æt.* 17, periosteal growth lower end of femur, 3 months; amputation of thigh; recurrence in lungs; round-celled growth. *Æt.* 44, recurrent growth; two operations previously; removed; found to be adherent to sheath of femoral artery; structure round-celled with a few spindle cells. *Æt.* 65, small round-celled growth affecting leg; recurrent; commencing 2½ years before as primary cutaneous growth; removed; three attacks of erysipelas. *Æt.* 42, negress; size of hen's egg; front of thigh; cutaneous growth; removal; spindle-celled.

l. Rectum.—Male, *æt.* 23, R. 4—5 months; increasing difficulty in defæcation; growth surrounding rectum; firm; no ulceration.

Cystic of—

Ovary.—C. 12, R. 2, D. 4. In 17 ovariectomy was performed.

CASE 1.—*Æt.* 43, married. Increase in size of abdomen 18 months to 2 years; pain in left side; multilocular tumour; knuckle of intestine adherent to fundus of cyst; temperature at 4 a.m. next morning 101°, but soon became and continued normal. Discharged 23 days after operation.

CASE 2.—*Æt.* 58, single. 6th admission; tapped each time; multilocular tumour without adhesions; no bad symptoms. Discharged 48 days after operation.

CASE 3.—*Æt.* 25, single. Gradual painless enlargement of abdomen; 12 months. One severe attack of abdominal pain without vomiting; large unilocular cyst containing 17 pints dark greenish fluid; one adhesion; vomiting for 2 days; no other bad symptom. Discharged 26 days after operation.

CASE 4.—*Æt.* 33, married. Youngest child 3 months old; noticed that abdomen was larger 12 months ago. One attack of severe pain in abdomen with vomiting. Wall of cyst adherent all round, and after contents evacuated part removed, but the adhesions in pelvis too intimate to allow of separation; neither pedicle nor ovary removed; bone drainage; fluid in cyst of consistency of treacle, brownish colour, very offensive. Discharged 101 days after operation.

CASE 5.—*Æt.* 46, married. Growth 2 years. Comparatively painless; considerable stretching of abdominal walls between umbilicus and ensiform cartilage; 40 days before operation a few ounces of ascitic fluid drawn off. Solid tumour connected with right ovary; ascites; left ovary found diseased and removed. Discharged 66 days after operation.

CASE 6.—*Æt.* 40, married. 2 years' growth. 3 attacks of abdominal pain; multilocular cyst with much solid matter. Discharged 27 days after operation.

CASE 7.—*Æt.* 50, married. 5 years' painless growth. Great distension of abdomen; a little free fluid; unilocular cyst containing 16 pints fluid, adherent to wall in front and intestine above and behind; adhesions recent; left ovary affected. Discharged 32 days after operation.

CASE 8.—*Æt.* 30, single. Increase in girth noticed 6 months. Cyst unilocular; no adhesions; 13½ pints fluid. Discharged 31 days after operation.

CASE 9.—*Æt.* 42, married. Enlargement of abdomen noticed 10 weeks. Uni-

locular cyst connected with left ovary, 22½ pints of fluid; adhesions to omentum, Fallopian tube, and recent to wall. Discharged 30 days after operation.

CASE 10.—Æt. 25, single. 6 years. Multilocular cyst; Fallopian tube of opposite ovary adherent. Left hospital 40 days after operation.

CASE 11.—Æt. 30, married. 9 months. Unilocular cyst connected with right ovary, very extensive and vascular adhesions all round; 23 days afterwards 17 ounces of offensive pus removed by aspirator from abscess above right Poupart's ligament no further trouble. Left hospital 44 days after operation.

CASE 12.—Æt. 32, married. 6—7 months. Some thick yellow viscid fluid in peritoneal cavity; multilocular cyst; left ovary; pedicle long and very soft, much solid matter. Discharged 40 days after operation.

CASE 13.—Æt. 25, married. Growth 3 years. Admitted once for peritonitis; adherent solid tumour connected with right ovary; several adhesions, some pain; pedicle found twisted. Discharged 34 days after operation.

Relieved.—Æt. 25. 3 years' growth. 2 children since first noticed. Admitted with peritonitis and anæmia; was in hospital 10 days; afterwards re-admitted and successfully operated upon. See No. 13.

Æt. 28. 3 months. Malignant; general of abdomen; jaundice. To Medical Ward.

Fatal cases.

CASE 1.—Æt. 43, widow. 14—15 months. Had been tapped once. Multilocular but extremely adherent, so that cyst wall was left in several places, especially in hepatic region; lived 5 days. P.M.—Extensive peritonitis.

CASE 2.—Æt. 54, single. 2 years. Multilocular cyst apparently connected with right ovary, but parts much matted together; pedicle long and twisted; some discoloration of adjacent parts of tumour; lived 9 days. P.M.—Peritonitis, about 2 ounces of pus in Douglas's pouch surrounding ligatured pedicle.

CASE 3.—Æt. 54, married. 4 months. Œdema of lower extremities; cyst unilocular, very adherent to posterior wall of bladder and fundus uteri; dissected off bladder and removed with body of uterus; ligatures having been applied just above cervix, both ovaries removed; lived 2 days. P.M.—Contracted granular kidneys; cardiac hypertrophy.

CASE 4.—Æt. 42, married. 4 months. Dyspnœa and cough; occasional vomiting; immense distension of abdomen; trace of albumen in urine; tapped, 11 pints fluid removed, yellow and turbid; 6 pints of fluid found in peritoneal cavity, and a large cancerous mass growing in connection with omentum; drainage tube inserted and wound closed; died next evening.

Each operation carried out with antiseptic precautions.

Myofibroma.

Of Uterus.—R. 1, D. 2.

R., æt. 45, single. 9 years. Size of cocoa nut; diarrhœa; removal not recommended.

D., æt. 40, married. 2 years. Interfering with respiration; œdema of right leg; large intramural fibroid removed with body of uterus and ovaries, which were slightly enlarged and cystic; did not recover from shock of operation; lived 3 days. P.M.—Slight localised peritonitis, and about 6 ounces blood-stained serum in cavity of pelvis.

Æt. 39, single. 6 years. Much abdominal tenderness; very adherent; tumour, which was large and very vascular, removed with right ovary and upper part of uterus above a double ligature of silk; a small fibroid removed from posterior part of stump, ligatures again applied and stump seared with cautery; left ovary also removed; lived about 16 hours after operation. P.M.—Peritoneal cavity contained about a pint of fluid blood.

NERVOUS SYSTEM.

Tetanus (admitted as such).—D. 2. Male, æt. 18. Punctured wound of foot; 6 days. Stiffness of neck and jaw, with difficulty in swallowing, and some spasm. 24 hours. Profuse perspirations, thirst, restlessness; healthy purulent discharge from the wound; some severe spasms with opisthotonos. Morphia, subcutaneously at first, but for last 7 hours chloroform inhalation. Temperature before death $106\cdot3^{\circ}$, 20 minutes after $108\cdot2^{\circ}$.

Male, æt. 61. Contused wound of nose and contusion of head; 8 days. Stiffness of neck and jaw, with difficulty in swallowing; dyspnoea and occasional spasm. Bromide of potassium ordered, discontinued next day; nutrient enemata. Spasms increased and laryngotomy performed, but patient died about 15 minutes afterwards, having lived 4 days after first appearance of symptoms. P.M.—Nothing remarkable in either case.

CIRCULATORY SYSTEM.

Aneurism.—Male, æt. 56. 3 months' swelling in left groin. No history of syphilis, but 10—15 years ago sore on penis with suppurating bubo. Aneurism large, under and above Poupart's ligament; skin red and coverings apparently thin, extending upwards to 4 inches from umbilicus. Also a small aneurismal swelling in right groin. No arcus senilis but radials tortuous and hard; external iliac ligatured with tendon from Kangaroo tail, about 1 inch above aneurism; pulsation ceased at once. Dressed twice, antiseptics discontinued 18 days afterwards. Slow consolidation with puckering of skin over it. Aneurism in right groin slightly larger.

Female, æt. 69. 10 months' swelling below left clavicle; involuntary rhythmical movement of right arm for last 7 years, but not obliged to use left arm much more in her work. Size of a small orange, junction of mid one-third with outer one-third clavicle. Slight arcus senilis; ligature of third part of subclavian artery with catgut; next day pulsation in radial. Antiseptics discontinued on

10th day. Tumour gradually became smaller and harder, but faint pulsation could be felt in it when discharged 63 days after operation.

DIGESTIVE SYSTEM.

Hernia.—(See Special Table I, Hernia.)

Fistula in ano.—C. 15, R. 4, U. 2, D. 1. In 9 history of previous fistula, 3 family history of phthisis, 4 symptoms of phthisis, 1 died, ulceration of larynx and intestines, and cavities in lungs; 4 abscesses incised, hæmorrhoids in 2; 16 fistula divided.

Obstruction of bowels.—C. 3, D. 1. Female, æt. 50. 4 days' constipation, abdominal pain and vomiting; enemata and purgatives. Female, æt. 52. 5 days before relieved by enema; vomiting; ring of new growth surrounding upper part of rectum; colotomy; fæces discharged through wound in loin. Female, æt. 42. Constipation 14 days, more recently vomiting and much griping pain, followed by distension of abdomen. Some ascites; marked distension; enemata without effect. Abdominal section proved existence of annular stricture of sigmoid flexure and peritonitis; incision made in loin and intestine joined to wound above stricture. Gut opened next day, no bad symptom. When discharged, 52 days afterwards, was passing motions by rectum, and wound in loin almost healed.

Fatal case.—Male, æt. 8. 10 days before admission fell downstairs. 7 days' severe epigastric pain with vomiting; 4 days' constipation. Admitted with distension of abdomen, marked peristaltic action of intestines and vomiting; enemata returned unchanged. Treated by opium, ultimately abdominal section performed. Some adhesions broken down; intestines congested and much distended; punctured with fine trochar. P.M.—In addition to marks of constriction produced by bands mentioned above, a constriction 38 inches above ilio cæcal valve, possibly result of old intussusception followed by sloughing.

GENITO-URINARY SYSTEM.

Hydrocele.—C. 4. 2 left, 2 right. The present collection of fluid in existence 5, 10, 15, and 36 months respectively. 1 had been tapped once before, and 1 nine times. *Treatment*.—1 tapping only, 3 tapping and injection of iodine; in 1 the injection was followed by rigors and reaccumulation of fluid, but this was relieved by a second tapping without injection.

The case of suppuration of hydrocele was tapped in Out-patient department 4 days before, and injured himself whilst at work. Cured by free incision.

Epididymitis.—

α. Acute.—C. 2, R. 1. 1 admitted with gonorrhœa; 2 discharge recommenced after admission; 1 with orchitis and ac. hydrocele, relieved by puncture.

β. Tubercular.—R. 3, D. 1. In none family history of phthisis. 3 occurred on right side, and in each there was abscess. 1 double, admitted with incontinence

of urine, which contained pus and blood; vomiting and great general depression. P.M.—Advanced strumous pyelonephritis.

Calculus vesicæ.—C. 2, D. 1. Male, æt. 7. No history could be obtained. Extracted by lateral lithotomy, large uric acid stone; some hæmorrhage after operation, easily controlled. Female, æt. 44. Symptoms 2 years; kept bed for 6 months on account of pain on movement; operation 16 years ago for lacerated perinæum; small rounded particles of phosphates adhering and forming large calculus; no nucleus discovered; extracted through dilated urethra. *Fatal case.*—Male, æt. 36. Commenced 9 months ago suddenly. Cystitis and great pain with dry, brown tongue; calculus $1\frac{1}{2} \times \frac{3}{4}$ inch, extracted by lateral lithotomy; lived 4 days. P.M.—Cystitis, enlarged prostate, surgical kidneys.

Retention of urine.—C. 16. 11 result of stricture, 4 result of spasm in inflammatory condition of urethra, usually brought on by drink; 1 enlarged prostate. *Treatment.*—Warm bath and opium primarily in 6, in 4 of which catheterism afterwards employed; 8 catheterism only; tapping above pubes 1, perinæal puncture 1.

Stricture of Urethra.—C. 15, R. 6, D. 3. Gonorrhœa probable cause in 20, but strongly denied in 2; injury to perinæum 3; ascribed to cold 1. *Complications.*—Cystitis 2; œdema of genitals 1; scrotal abscess 1; extravasation and perineal fistula 1; perineal fistula 1; adherent prepuce 1; hæmorrhage from urethra 1; retention of urine 1; foreign body in bladder 1; rheumatism 1. *Treatment.*—Interrupted dilatation 11; continuous dilatation 3; internal urethrotomy 5; external urethrotomy 3; perineal puncture 2; incision of meatus 1. *Fatal cases.*—Cystitis and surgical kidneys 2; 1 valvular stricture of urethra, also contraction of meatus, requiring incision, followed by rigors and suppression of urine. P.M.—Cystitis, congestion of kidneys.

Hydronephrosis.—C. 1, R. 3. C., Male, æt. 12. Hæmaturia after abdominal injury 5 weeks before, left side; tapped 8 times, and from 38 to 80 ounces of urine drawn off at each tapping. R., male æt. 6. 4 months before abdominal injury, followed by hæmaturia; fluctuating swelling in left loin. Tapped twice, 37 and 30 ounces drawn off; the fluid consisted of changed blood and urine. Readmitted twice during year, and clear fluid drawn off on each occasion, 20 and 25 ounces respectively.

Calculus of kidney.—Female, æt. 39. 12—13 years' nephralgia, right side; 15 months' abscess broke in right loin leaving sinus, which is still discharging; several small calculi passed from this 7 weeks since. Calculus felt in sinus; incision made in loin and a stone, which had advanced some distance from kidney, extracted; nothing found in pelvis of kidney. Convalescence retarded by double pneumonia a month after operation.

Gonorrhœa.—Male 1, Female 19. C. 17, R. 3. *Complications.*—Stricture of urethra 1; bubo 3; sloughing bubo 1; warts 7; labial abscess 2; rheumatism 1; hæmorrhoids 1; enlarged tonsils 1.

Soft Sore.—Male 6, Female 18. C. 20, R. 4. *Complications.*—Males, phimosis 2; paraphimosis 1; 3 phagedenic; 2 with severe hæmorrhage. Females, vaginal

discharge 13; bubo 9; warts 4; vulval œdema 1; hæmorrhoids 2; fissure of anus 1; erythema nodosum 1; scabies 8; vascular growth of meatus urinarius 1; anæmia 2; pneumonia 1; congenital absence of vagina 1, readmitted.

DISEASES OF LOCOMOTORY SYSTEM.

Of hip-joint.—Males 39, females 30. C. 41, R. 24, D. 4. Incipient (1st stage) 27; 2nd and 3rd stages 35; old excision 1; ankylosis 4, in 2 subcutaneous osteotomy performed; rheumatism 1; hysterical 1. Excision of joint in 14; incision of joint in 1 acute case; incision of abscess 16; aspiration of abscess 4; disease of both hips 1; disease of tarsus 1, of pelvis 1. Erysipelas developed in 3; measles 1; scarlatina 1; typhoid fever 1.

Fatal cases.—Male, æt. 7. Hip disease 3 months. Symptoms slight, free and painless movement of joint; abscess formed outer side of thigh; dilated and fixed pupils; nystagmus; hands very tremulous; hectic; optic neuritis; emaciation; abscess inner side of thigh; bedsores. P.M.—2 tubercular masses in dura mater at base of brain, each the size of a walnut; three or four small tubercular masses in lungs.

Female, æt. 6. Hip disease 14 days. Rigidity; flexion; starting at night. Examined under chloroform. Grating in joint; excision, opening communicating with interior of pelvis; head of femur absorbed; wound healed. Optic neuritis; nystagmus; dilated and fixed pupils; tremulous movements of hands; hemiplegia following slight convulsion; emaciation. No post mortem.

Female, æt. 26. Symptoms referred to left hip after enteric fever. 7 months; extreme tenderness, fluctuation, some displacement. Excision; wound almost closed, then discharge increased; diarrhœa; troublesome cough; night sweats; dyspnoea; signs of cavity at left apex; exhaustion. No post mortem.

Female, æt. 19. Pain in hip and groin after falling on hip. 18 months. Fulness in groin and starting at night; abscess opened, excision; erysipelas; abscess opened in groin; loss of appetite. Placed on water bed. Thin purulent discharge from sinuses; 2nd attack of erysipelas; bedsores; great emaciation. P.M.—At apex of each lung contraction of fibroid material around small caseous masses; a few scattered tubercles; amyloid disease of abdominal organs.

Of knee-joint.—Males 42, females 26. C. 27, R. 37, D. 4. Incipient 14; chronic 54; old excision 2; fibrous ankylosis 4; loose bodies 3; extracted 2; after confinement 1; rheumatism 1; rheumatoid arthritis 5; admitted with suppuration of joint 7; in 1 disease of shoulder; 1 of os calcis; 1 compound ganglion of wrist; 1 bursal enlargement over hip; contracted erysipelas 2; measles 1.

Fatal cases.—Female, æt. 14. 3 years' pain, 7 months' swelling, wearing splint 5 months. 63 days after admission joint excised. Tubercular disease of synovial membrane; slight hæmorrhage after return to bed, but patient never rallied from shock and died same day. P.M.—Tuberculosis of left lung and liver.

Female, æt. 38. Injured knee after a long illness, nature of which doubtful. 5 weeks' gradual swelling and much pain; incision into abscesses; bedsores; typhoid condition; offensive discharge; exhaustion. No post mortem.

Female, æt. 10 months. 3 weeks. Incisions and drainage tube passed across joint; stomatitis; diarrhœa; purpuric spots. Lower end of diaphysis of femur removed; exhaustion. No post mortem.

Male, æt. 50. Pain in knee 7 weeks; 4 weeks' pain in whole leg; restless nights; swelling of leg from thigh to ankle; œdema; delirium; incisions; profuse discharge; slight rigors; bedsores; exhaustion; in hospital 9 days. No post mortem.

Of ankle-joint.—Males 5, females 3. C. 5, R. 3. 1 gonorrhœal synovitis with suppuration round joint; 1 excision, symptoms of phthisis developed and leg amputated on readmission; 1, æt. 56, Syme's amputation; 1 incision outer side of joint, removal of sequestrum from upper surface of astragalus, and joint scraped; 3 plaster-of-Paris splints applied.

SUMMARY OF INJURIES.

GENERAL INJURIES.

Frostbite.—Female, æt. 4. Suffering from chilblains; out during heavy storm of snow in February, and exposed all night to cold, 2 weeks before admission. Both feet affected, left more than right; sloughing of toes and gradual removal of bones.

Burns.—Males 25, females 18. C. 19, R. 10, D. 14. General 18; face and head 2; face and upper extremities 7; upper extremities 8; lower extremities 2; chest 6. Of these 5 epileptic; 7 caused by night-dress catching fire; 3 gas explosions; 1 ether explosion. 1 erysipelas; 2 hæmorrhage, in 1, æt. 21, sloughing of tendons of forearm, 14th day hæmorrhage from ulnar artery, 16th from radial: in each case requiring double ligature; 1 charring of fingers; 1 of eye, suppuration. *Treatment*.—Carron oil 16; terebine and oil 13; Cat. Lini 2; acetic acid and whiting 7; almond oil 1; carbolic oil 2; saturated solution of bicarbonate of soda 1. 2 died from collapse before special treatment.

Fatal cases.—Males 6, females 8. 5 collapse, in 1 also vomiting and diarrhœa; 1 congestion of lungs; 1 erysipelas; shock 1; convulsions 2, in 1 temperature of 107.2° ; exhaustion 2, 1 from hæmorrhage and diarrhœa; exhaustion and shock 2; chorea and shock 1.

Scalds.—Males 19, females 15. C. 24, R. 7, D. 3. General 2; face, arm, and trunk 2; face and arm 1; face and head or neck 7; fauces 3, requiring tracheotomy 1; chest 1; lower extremities 15; arms and trunk 3.

Fatal cases.—Males 3. All under 2 years of age; 2 within 24 hours; 1 shock, 1 convulsions, 1 within 48 hours' shock. *Treatment*.—As primary application: Carron oil 22; almond oil 1; terebine and oil 6; acetic acid and whiting 1; carbolic oil 1; in 3 steam kettle used.

LOCAL INJURIES.

HEAD.

Scalp wound.—Males 30, females 4. C. 30, R. 4. Exposed bone in 6. *Complications*.—Slight concussion 4; division of temporal artery 1; wound of face 1, of leg 1; sprain of ankle 1; contusion of face 5, of thigh 1, chest 2, abdomen 1; followed by aphasia 1; by dilatation of pupil 1; by suppuration 2; erysipelas 3. Majority treated antiseptically.

Concussion.—Males 51, females 8. C. 54, R. 5. *Complications.*—Bleeding from ear 3; epistaxis 9; facial paralysis 1; impairment of vision 1; subconjunctival ecchymosis 4; aphasia 1; probable laceration of brain 1; temporary inequality of pupils 3; shock 1; retention of urine 1. Fractures, 2 radius and ulna; ulna 1; Colles' 2; clavicle 1; inferior maxilla 1. Wounds of face 3; scalp 11; thigh 1; side 1. Contusions, general 1; face 4; scalp 6; head 2. 1 male, æt. 40, found unconscious 8 hours before admission. Contusions of head; quite insensible; very irritable; on 4th day over 40 convulsive seizures, lasting about 30 hours; gradual recovery of consciousness, memory. Much headache, relieved by Liq. Hyd. Perchl. Residence 69 days; C. Male, æt. 56, liable to attacks of speechlessness; slight attack of right hemiplegia 12 months ago; contusion of right parietal; speechless; able to write name and address; no paralysis evident. In 2 days left facial paralysis and drowsiness; gradual improvement; highest temperature 100·8°. Residence 28 days.

Fracture of vault of skull.—*Simple.*—Male 1, females 3. R. 1, D. 3. *Relieved.*—Male, æt. 3. Depressed fracture of parietal; 5 months; suffering from headache.

Fatal cases.—Female, æt. 9 months. Mother fell downstairs with child in her arms. Gradual loss of consciousness; vomiting. Admitted insensible; eyes strongly turned to right; cold; fracture felt on right side of skull, soon obliterated by swelling produced by blood effusion; convulsive movements; stertor; severe convulsion. P.M.—Separation of squamous portion of temporal bone from its attachments and fracture of it; laceration of brain; effusion of blood under scalp, and over surface of brain from base to vertex.

Female, æt. 8. Knocked down and run over by a light cart. Was unconscious for 1½ hour; epistaxis; admitted conscious; contusions and abrasions of face, also slight wound near left temple; no visible contusion of abdomen, but severe pain in left side when moved. At 2 a.m. next day slight convulsive seizure, followed by gradual loss of consciousness, stertor, and dilatation of pupils, right the larger, rather fixed. P.M.—Fracture of vault of skull; basal meningitis; rupture of liver (extensive), and also of right kidney.

Female, æt. 2, fell from second story window. Convulsive seizure with dilatation of pupils; unconsciousness; considerable discoloration of scalp, chiefly posterior part of head; sodden feeling, apparently from extravasation of blood under and into its substance; no further symptom. P.M.—Fracture of vertex extending from left temporal region to greater wing of sphenoid on right side.

Compound depressed fractures of vault.—Males 2. C. 2.

Male, æt. 56. Fall on spike whilst in epileptic seizure. Walked to hospital; starred wound of scalp over posterior superior angle of left parietal, under which depressed portion; trephined. 3 pieces of bone removed; antiseptic; no symptom from first to last; 50 days.

Male, æt. 25. Fell backwards with head on a revolving wheel. Wound extending from occipital protuberance forward for two inches, under which depression and sharp spiculum of bone. Frequently vomited before admission. Severe headache; mind clear. Trephined, a piece of bone, removed; antiseptic; headache for 4 days after; on 5th day pulse 48, temp. 98·4; highest temperature evening 2nd day 100·6°.

Compound fractures of skull.—Males 2. C. 1, D. 1.

C., æt. 28. Insensible 3 minutes after blow from crowbar on forehead, which produced a linear fracture of skull and wound over it to left of median line. Some suppuration followed and slight headache.

D., æt. 14. Bullet from pistol fired at six yards' distance entered side of head through pinna of left ear. Probe passed for 2 inches; no bullet found; vomiting. 5th day: discharge from wound and swelling round it; temp. $104\cdot2^{\circ}$, and incision made; vomited very frequently; insensible last 2 days. P.M.—Small portion of bone driven into tempero-sphenoidal lobe, surrounded by acute cerebritis, confined to grey matter; bullet found loose; acute meningitis of left hemisphere.

Fractures of base.—Males 13, females 1. D. 9, C. 5.

Cases discharged cured.—Male, æt. 26. 3 years ago hæmorrhage from right ear after severe injury to head. Fell down area 12 feet, admitted soon after; insensible; widely dilated pupils; hæmorrhage from ears; gradual recovery of consciousness; vomited constantly for 2 days; slight discharge from right ear, ceasing on 7th day.

Male, æt. 21. Found on line, unconscious; constant vomiting; irregularity of pupils; hæmorrhage from right ear; small scalp wound back of head on right side; bone exposed; discharge from ear went on until 7th day; refused to remain longer than 11 days.

Male, æt. 8. Knocked down by tramcar, pole striking head; slight scalp wound; hæmorrhage from left ear, and rupture of tympanic membrane, lower and posterior part. Was in hospital 23 days.

Male, æt. 6. Fall from third story window; insensible, and continued so for 2 hours; collapsed; hæmorrhage from nose; vomiting; proptosis of left eye and contusion of lids; right pupil dilated; paralysis of 6th nerve; probable damage to optic nerve in optic canal, or hæmorrhage into orbit. 6 weeks after admission there was still paralysis of 6th nerve, and in addition marked white atrophy of the disc, only on injured side.

Male, æt. 6. Fall from third story window, 30 feet; insensible; scalp wound; hæmorrhage from left ear, nose, and mouth; fracture of upper part of right femur, and Colles' fracture of left radius. Discharged in 43 days.

Fatal cases.—Males 8, females 1.

Female, æt. 37. Fell downstairs whilst drunk. Had vomited; insensible; pupils unequal, fixed; hæmorrhage from left ear; became suddenly in condition of asphyxia on 3rd day, and venesection, external jugular, was performed to 10 ounces, and repeated on other side to 8 ounces; some but only temporary relief. Lived 2 days. P.M.—Fracture of base from frontal on left side to foramen magnum; hæmorrhage under dura mater on left side; contusions of anterior part of brain; temp. $105\cdot2$ in rectum, 15 minutes before death.

Male, æt. 23. When first found "could answer questions," but 3 hours after unable to do so, though able to walk with assistance; scalp wound over a comminuted fracture above left ear, which required removal of pieces of bone. Regained consciousness; restlessness; headache; temp. $105\cdot4^{\circ}$. Venesection right elbow to 12 ounces; marked improvement; restlessness; twitching of right side; profuse perspiration; slight convulsion. Venesection left elbow to 7 ounces.

P.M.—In 5 minutes temperature in rectum 108.8° ; fracture extended across to middle of sphenoid; much laceration of brain; some laceration at apex of each frontal lobe. Lived 3 days.

Male, æt. 23. ? Idiot. Fell from hay-loft. Unconscious since; stertor; pupils equal and acting; traces of hæmorrhage from right ear, mouth, and nose; moaning and restless; temp. 105.4° before death. Lived 4 days. P.M.—Large clot in position of right middle meningeal artery; fractures of middle fossa and right side of anterior fossa; extravasation into and contusion of brain.

Male, æt. 54. Pitched out of a cart, fell on head. Oblique scalp wound over right temporal fossa; subconjunctival hæmorrhage and hæmorrhage from nose; coma; stertor; pupils insensitive; unilateral convulsion confined to left side; hiccough. P.M.—Fracture of base. Lived 2 days.

Male, æt. 40. Fall, 30 feet. Insensible since; stertor; profuse perspiration; hæmorrhage from nose and under eyelids; marked rigidity of left side; temp. 105° soon after admission. Lived 1 day. P.M.—Fracture extending from a wound over right frontal bone down to base.

Male, æt. 55. Fall, 35 feet, scaffold. Insensible and in state of collapse; fracture of base and vault, of ribs and right clavicle.

Male, æt. 51. Found insensible by side of his cab. No hæmorrhages; small scalp wound; fracture of posterior fossa; cerebral hæmorrhage; fracture of ribs.

Male, æt. 32. Fall, 20 feet. Severe scalp wound; insensible; restless; occasional twitchings of right hand and arm; fracture of posterior fossa, and hæmorrhage from lateral sinus.

Male, æt. 24. Knocked down by engine. Compound comminuted fracture of skull extending from vertex to base; protrusion of brain; rupture of right eyeball; removal of bone; venesection.

The last 4 cases lived under 12 hours after injury.

INJURIES OF THE ABDOMEN, CHEST, SPINE, AND PELVIS.

Injuries of the abdomen.—Contusions 27. C. 20, R. 4, D. 3. Majority of these severe; in 7 vomiting chief symptom; 4 hæmatemesis; 4 hæmaturia; 7 retention of urine; shock marked in 9; contusion of intestine 1; peritonitis 2.

Fatal cases.—Male, æt. 54. Died shortly after admission, about 10 hours after receipt of injury, kick from horse. Collapse; great abdominal pain; tenesmus; rigidity of abdominal walls. P.M.—Clean-edged rupture of small intestine, 6 inches from pyloric orifice; commencing peritonitis.

Male, æt. 13. Kick from horse. Collapse and great abdominal pain; lived 2 days. P.M.—Rupture of intestine in upper part of jejunum, and extravasation of contents; acute peritonitis.

Female, æt. 4. Run over by Hansom cab. Great collapse; râles all over chest; contusions, face. P.M.—Rupture of liver; hæmorrhage into and behind peritoneum; contusion of lungs.

Fractures of sternum.—Males 2. C. 2. Male, æt. 31. Fall of plank, causing depression of second part; 2 days after admission regained normal position.

Male, æt. 40. Fall of 15 feet; same situation. Pneumonia on 6th day.

Fracture of ribs.—Males 33, Females 8. C. 18, R. 21, D. 2. In 7 only 1 rib broken; 23 indirect violence, 17 direct; 1 muscular action. *Complications.*—Hæmoptysis 8; emphysema 3; cough 6; bronchitis 3; pleurisy 2; pleurisy and bronchitis 1; contusions 3; injury to abdomen 4.

Fatal cases.—Male, æt. 61. Thrown from Hansom cab. Fracture of 9th, 10th, and 11th ribs on left side; broncho-pneumonia; pleurisy; contracted granular kidneys.

Male, æt. 20. Struck by pole of tram car. Fracture of 6 ribs, 2 to 7; hæmatothorax; pneumothorax; laceration of lung; pleurisy. Lived 2 days.

Fracture of spinal column.—C. 1, D. 3.

Cured.—Male, æt. 21. Fell 15 feet on to his head. Fracture of 2nd dorsal spine, which was very movable; scalp wound and general contusions.

Fatal cases.—Male, æt. 26. Four days before admission fell out of a cart and was bent between wheel and body of cart. Paraplegia followed, but not loss of sensation; no control over sphincters; bed-sores began to form; complete absence of abdominal reflex, also of tendon-reflex in legs. Respiration became almost purely diaphragmatic, and patient died 3 days after admission, with a temperature of 108·6°. P.M.—Transverse fracture of 1st dorsal vertebra and rupture of ligaments; effusion of blood into muscles over seat of injury and into spinal canal, also into central part of lower cervical enlargement; arachnitis; softening of cord; cystitis, and recent peritoneal inflammation round bladder.

Male, æt. 52. Fell 14 feet on to his head. Loss of sensation and power as high as nipple, partial in arms; respiration laboured; vomited; retention of urine. Lived 1 day. P.M.—Fracture of 6th cervical vertebra and displacement forwards, crushing spinal cord.

Male, æt. 75. Picked up unconscious in street. Scalp wound, with bared bone; stertor; complete insensibility. Lived 3 hours. P.M.—Transverse fracture of 5th and 6th cervical vertebræ and much extravasation of blood into prevertebral muscles; laceration of spinal cord.

Fractures of pelvis.—Males 8. C. 2, R. 1, D. 5.

Cured.—Æt. 6. Wheel of cart passed over pelvis. Insensible; involuntary evacuations; much pain; crepitus elicited on left side of pelvis. Left in 63 days.

Æt. 26. Crushed between cart and gate-post. Fracture of left iliac crest 2 inches from anterior superior spine.

Æt. 43. Fell downstairs. Fracture of right anterior superior spine; hæmaturia. Plaster-of-Paris splints in each case.

Died.—Æt. 3. Run over by omnibus. Deep laceration of right thigh and scrotum; fracture of left internal malleolus; fracture of right side of pelvis 2 inches from symphysis. Temperature 96·2°. Died from shock in 2 days.

Æt. 10. Run over and kicked by the horse. Extensive fracture of right side of pelvis; much bruising and extravasation of blood around; wounds of face; vomited almost continually for 2 days, then much abdominal pain. Lived 3

days. P.M.—Double fracture of right pubes and dislocation of right sacro iliac synchondrosis. Recent peritonitis.

Æt. 25. Fell 30 feet. Much pain in head; fracture of inferior maxilla; delirium; restlessness; swelling and pain in left elbow. P.M.—Comminuted fracture of pubic bones; large abscess surrounding seat of fracture and suppuration in left elbow-joint; compound fracture of inferior maxilla; congestion and œdema of lungs.

Æt. 34. Crushed between two railway carriages. Fracture of pelvis on right side; rupture of urethra; dislocation of sternal end of left clavicle forwards and inwards; ecchymosis of face; restlessness; delirium; tremulous hands; dry, brown tongue; diarrhœa; abdominal distension. Some spots resembling those of typhoid fever 10 days after admission. Lived 12 days. Highest temperature 104°. P.M.—Abscess cavity beneath and about dislocated end of clavicle; fracture of ribs 1—6 on left side, 1st rib on right, and suppuration at point of fracture in more than one; extensive fracture of pelvis on each side; rupture of urethra and abscess cavity containing urine between symphysis and bladder.

Æt. 3½. Run over by tram car. Fracture of pelvis on left side, of left femur, and severe laceration of soft parts on right side of perinæum and anus. Died from shock.

INJURIES OF THE UPPER EXTREMITIES.

Wounds.—C. 9, R. 8. Tendons divided in 2; lacerated, followed by erysipelas, 1; cellulitis 1; sloughing 1; requiring amputation of digit 3; gunshot wound 1; needle removed 1.

Wounds of artery.—C. 5, R. 2. Superficial palmar arch, incised 1; lacerated 1; in 3 cases incised of ulnar artery, nerve, and tendons; in 2 division of radial artery, in 1 of which flexor carpi radialis also divided; in 4 of these tendons successfully sutured.

Fracture of acromion.—R. Male, æt. 50. Fall from fire engine on shoulder. Separated at junction with spine of scapula.

Fractures of humerus (simple).—6. Direct violence 3; indirect 2; spontaneous (?) tumour 1; 1 separation of lower epiphysis; 2 lower end into elbow-joint; 1 impacted of neck, 2 of shaft; fracture of radius in 1; synovitis of elbow 1; of knee 1; severe contusion of arm 1.

Fracture of humerus (compound).—5. 1 admitted with concussion and hæmorrhage from nose; 2 separation of lower epiphysis; injury to brachial artery 1; extending into elbow-joint 2; partial resection 1; delirium tremens 1; 3 direct violence. *Compound comminuted.*—4. C. 3, D. 1. All due to direct violence. Bullet wound, with bullet wound of hand, 1; with fracture of ulna 1; into elbow-joint 3; fracture of skull and ribs 1; primary amputation 2.

INJURIES OF THE LOWER EXTREMITIES.

Dislocation of femur.—Males, 5. Æt. 8. Fall on hip; dorsal dislocation easily reduced under anæsthetic by manipulation:

Æt. 6. Dorsal dislocation; history of injury to hip 2 or 3 months ago, but probably congenital; easily reduced on extension, but returning to same position.

Æt. 5. Pubic dislocation; lameness for some time, worse lately, probably congenital. No attempt made at reduction.

Æt. 7. Fell whilst running. Dorsal dislocation, $2\frac{1}{2}$ inches shortening. Reduced by manipulation under anæsthetic. Readmitted 3 months later with similar dislocation of same hip, but reduction took place whilst being carried to ward.

Dislocation of head of fibula.—Male, æt. 36. Forwards; result of fall from platform of railway station on line below. As a complication in a case of fracture of tibia and fibula.

Dislocation of foot.—Male, æt. 14. Partial, backwards; no fracture detected; deformity and widening of ankle. Easily reduced.

Dislocation of astragalus.—Male, æt. 39. Fall from ladder on outer side of foot, which was bent under him, displaced forwards and outwards; skin tightly stretched over head of bone. Easily reduced under anæsthetic.

Fractures of femur.—80. C. 66, R. 5, U. 2, D. 7. *Simple.*—57, of which 40 were of the right and 17 of the left femur, and only 17 apparently due to direct violence; 2 fracture into knee-joint; 3 double fracture of shaft; 3 refraction; 1, æt. 42, compound fracture of tibia and fibula, other limb, and general contusions; 2 for reapplication of splint.

Fatal cases.—Male, æt. 40. Contusion of brain and fracture of right femur.

Male, æt. 56. Fracture of right femur; synovitis of left knee. Died on 22nd day. Pulmonary embolism.

Male, æt. 74. Fracture of right femur; cirrhosis of liver and kidneys; hypos-tatic congestion of lungs.

There were also 15 fractures of neck of femur, 10 intracapsular, 5 impacted, 5 unimpacted; 5 extracapsular, 2 impacted, 3 unimpacted. *Complications.*—Delirium tremens 1; sprain of wrist 1; Colles' fracture 1; thrombosis internal saphena vein 1.

Compound fractures.—C. 1, D. 1.

Cured.—Male, æt. 42. Fall, 20 feet. Compound fracture of shaft; transverse small wound; dressed antiseptically; no shortening. 47 days.

Died.—Male, æt. 65. Run over. Fracture of right thigh, compound; upper fragment protruding; considerable laceration; fracture of right tibia and fibula, also compound; much collapse. Antiseptic dressing. In 5 days gangrene of left leg appeared and delirium came on. Lived 9 days.

Compound comminuted.—C. 1, D. 3.

Cured.—Male, æt. 29. Crush of right femur 2 days, united without a bad symptom. Carbolic oil applied. Residence 63 days.

Died.—Æt. 5. Smash of left femur, with crush of soft parts; considerable hæmorrhage; shock; amputation upper third thigh. Died 4 hours afterwards.

Æt. 42. Run over by loaded van. Smash of lower end left femur; much injury to leg; amputation; hæmaturia. P.M.—Congestion of kidneys, and blood mixed with urine in bladder.

Æt. 20. Tram car wheel. Collapse; compound comminuted fracture of right femur into knee-joint, and much damage to soft parts; also simple fracture of tibia and fibula of left leg; rallied somewhat; amputation middle of thigh. Lived 24 hours.

Fractures of patella.—C. 19. Right patella 13. 2 cases of refraction; in 2 old fracture of other bone, in 3 aspiration of knee-joint.

Fractures of tibia (simple).—40. 20 right tibia, 15 left tibia. 20 due to direct violence, 15 to indirect violence, 5 doubtful. Transverse fractures 25; oblique 8, comminuted 1, ununited 3; of internal malleolus 3; 1 operation for ununited fracture. All the other cases were treated by lateral plaster-of-Paris splints, and in majority of cases gum bandage applied over splints before discharge.

Compound.—C. 3. 1 due to indirect, 2 to direct violence; 1 had delirium tremens; 1 erysipelas. All treated antiseptically.

Compound comminuted.—C. 3. In 1 secondary amputation.

Fractures of fibula (simple).—47. C. 18, R. 29. Of these the internal lateral ligament of ankle-joint was ruptured in 16, and the internal lateral ligament of knee, followed by synovitis, 1; displacement of foot 3; injury to ribs 2; general contusions 1.

Fractures of tibia and fibula.—92. Simple 70. C. 27, R. 42, D. 1. Majority due to indirect violence; comminuted 3; ununited 3; more than one point of fracture 3; synovitis of knee 1; dislocation of head of fibula and rupture of quadriceps tendon 1; fracture of forearm 1; fracture of ribs followed by bronchitis 1; pneumonia (fatal) 1; epileptic 1; general paralysis of insane 1.

Compound.—C. 13. Fracture of other leg 1; delirium tremens 2; syphilis 1; requiring incisions and secondary amputation 1; in 2 wound only small, treated with carbolic oil, remainder dressed antiseptically.

Compound comminuted.—9. D. 3.

Cured.—Male, æt. 42. Severe, followed by necrosis.

Male, æt. 27. Run over by express. Primary amputation of thigh.

Male, æt. 28. Run over by engine. Primary amputation of leg; also sustained compound fracture of vault of skull.

Male, æt. 56. Fall in street. Fracture into ankle-joint, with dislocation; division of tendo-Achillis; secondary amputation of leg; sloughing of flaps; suppuration in knee-joint; amputation of thigh. In hospital 141 days.

Male, æt. 39. Considerable comminution of tibia; small wound. 2nd day delirium tremens, 8th day hæmorrhage, requiring amputation below knee; 9th day after amputation hæmorrhage from popliteal, which was ligatured; delirious for some time. In hospital 94 days.

Male, æt. 36. Engine ran over left leg. Primary amputation of leg; slight secondary hæmorrhage 8th day; developed pleurisy when nearly well.

Fatal cases.—Male, æt. 29. Secondary amputation; pyæmia. See special table.

Male, æt. 40. Smash of both legs. Died from shock.

Male, æt. 75. Smash of tibia and fibula into knee-joint; laceration of lower part of thigh; primary amputation of thigh. Lived 4 days. Enlarged prostate.

APPENDIX.

The following more important injuries occurred as complications, and are not enumerated under above headings, which only include those admitted for injury under which they are grouped :

Concussion 6; fractures (compound) of skull 2; inferior maxilla 2; clavicle 1; ribs 11; radius and ulna 3; radius 6, 1 compound; ulna 2; femur 2; tibia and fibula 4; tibia 1; metacarpal (compound) 1; fingers 1; dislocations, clavicle from sternum, 1; head of fibula, with rupture of quadriceps tendon, 1; injury to chest 5; abdomen 7, in 1 hæmaturia; 1 rupture of liver and kidney; rupture of urethra 1 (pelvic fracture); wound of wrist-joint 1; synovitis of knee 7; of ankle 5; of wrist 3.



Inguinal.

No.	Occupation.	Sex.	Age.	Duration.	Duration of strangulation.	Treatment.	Structure.	Result.	Remarks.
1	Labourer	M.	20	Congenital	4 hours	Sac opened	Enterocoele	C.	Operation for strangulated hernia three years before. No radical cure.
2	—	M.	1	"	24 "	Extra peritoneal	"	C.	Operation for phimosis at same time. Measles.
3	Carman	M.	33	12 months	5 days	Sac opened	Epiplocele	C.	Retention of urine.
4	Labourer	M.	68	5 years	24 hours	"	Enterocoele	C.	Some recent adhesions to sac; operation followed by abdominal distension and pain, with delirium and slight diarrhoea; a swelling dull on percussion was found below and to right of umbilicus some days after; this became tympanitic and gradually disappeared.
5	Ostler	M.	41	7 "	2 "	"	Entero-epiplocele	C.	Intestine ecchymosed; omentum removed.
6	Potman	M.	26	15 "	1 "	"	Enterocoele	C.	Intestine congested, but bright.
7	—	M.	14 mos.	Congenital	2 days	"	Large intestine	C.	Sac partly removed; operation followed by orchitis and surgical scarlet fever.
8	Bootmaker	M.	59	10 years	4 "	Extra peritoneal	?	C.	Sac dissected up, ligatured at neck, and removed.
9	Labourer	M.	49	13 "	2 "	Sac opened	Entero-epiplocele	C.	Large intestine; contents adherent.
10	Policeman	M.	43	Congenital	4 "	"	Enterocoele	D.	Intestine dark, much congested; dark colored fluid in sac; diarrhoea. No P.M.
11	—	M.	5 mos.	"	2 "	"	"	D.	Intestine not changed; much distension, relieved by puncture of intestine; sac dissected up and removed; convulsions before and after operation.

SPECIAL TABLE I.—*Hernia (continued).*

No.	Occupation.	Sex.	Age.	Duration.	Duration of strangulation.	Treatment.	Structure.	Result.	Remarks.
12	Labourer	M.	45	20 years	20 hours	Taxis; sac opened	Enterocoele	D.	Large intestine; taxis successful three days after strangulation commenced; symptoms continued; incision over hernia carried into abdominal cavity; intestine gangrenous. P.M.—Hepatic flexure of colon attached to wound and forming artificial anus; localised peritonitis; pneumonia.
13	Carpenter	M.	74	20 "	3 days	Sac opened	"	D.	Very large; hernia could not be reduced. No P.M.
14	—	M.	1	Congenital	24 hours	Extra peritoneal	?	C.	
15	—	M.	69	4 years	3 days	Sac opened	"	D.	Intestine dark coloured, with greyish mottling; dull; lymph in sac; retention of urine. P.M.—Gangrene of intestine; perforation; peritonitis.
16	Clerk	M.	33	Congenital	24 hours	—	Entero-epiplocele	D.	Kind of hour-glass contraction of sac; intestine congested; secondary hæmorrhage; incision carried into abdomen. P.M.—Regular examination refused; hæmorrhage probably from veins of cord.
17	Hatter	M.	33	"	7 "	—	Enterocoele	D.	Intestine black, but polish good; sac removed; peritonitis; incision carried into abdomen; gut improved in appearance; left close to wound; large drainage tube; seven days after first operation fecal matter passed by wound; rigors; tumid swelling below um-

18	Stoker	M.	47	4 years	8½ "	Sac opened	Entero-epiplocele	D.	bilicus; examined by median incision; found communicating with wound and intestine. P.M.—Large abscess cavity; about 2½ inches of intestine had sloughed away; abscess did not communicate with peritoneal cavity. Sac opened on same side two years before; intestine ecchymosed; omentum removed; sac cut off. P.M.—Peritonitis; congestion of lungs. Hernia on other side for three years.
19	Messenger	M.	49	10 "	24 "	Ice	Enterocoele	R.	
20	Labourer	M.	42	7 "	3 days	"	—	R.	
21	Dock labourer	M.	33	17 years	2 hours	"	—	R.	Incomplete.
22	Labourer	M.	39	4 "	4 days	"	—	R.	
23	General dealer	M.	50	20 "	2 "	Ice; taxis	—	R.	
24	Painter	M.	31	2 "	11 days	Ice	Epiplocele	R.	Irreducible; bag truss.
25	Child	M.	4	Congenital	8 hours	Taxis; bath	Enterocoele	R.	Truss.
26	Labourer	M.	35	12-14 years	8 "	Ice; morphia	—	R.	Hernia on left side also.
27	Shoemaker	M.	45	Congenital	12 "	Taxis; ice	—	R.	Hernia on right side also.
28	House decorator	M.	40	17 years	1½ "	Ice; morphia	—	R.	
29	Painter	M.	32	Congenital	—	Ice	Enterocoele	C.	Painters' colic.
30	Printer	M.	21	2 years	3 days	Taxis; ice	?	C.	
31	General dealer	M.	16	?	2 "	Ice	Enterocoele	C.	
32	Labourer	M.	46	?	2 "	"	?	R.	
33	Married	F.	45	10 years	—	"	Entero-epiplocele	R.	Irreducible.
34	Ostler	M.	42	7 "	6¾ hours	Taxis	—	R.	Irreducible.

SPECIAL TABLE I.—*Hernia (continued).**Femoral.*

No.	Occupation.	Sex.	Age.	Duration.	Duration of strangulation.	Treatment.	Structure.	Result.	Remarks.
35	Married	F.	54	4 years	2 days	Sac opened	Entero-epiplocele	C.	Intestine dark coloured, polish good; some omentum removed; sac partly removed.
36	—	F.	68	6 months	4 "	—	Enterocoele	C.	Small knuckle of dark intestine; sac thick and white.
37	Horsekeeper	M.	35	1 month	20 hours	—	Entero-epiplocele	C.	Part of sac removed. Contracted erysipelas.
38	Married	F.	48	12 years	4 days	—	—	C.	Removal of omentum.
39	"	F.	32	2 "	3 "	—	—	C.	Small knuckle of intestine adherent to sac; recent adhesions, with some ecchymosis of surface.
40	Joiner	M.	47	14 "	2 "	—	—	C.	Omentum found adherent to sac, removed; rheumatism.
41	Single	F.	40	15 "	2 "	—	—	C.	Small knuckle of intestine adherent to omentum and to sac, reduced with difficulty.
42	Baker	M.	45	15 "	11 hours	—	—	C.	Hernia very large, containing small intestine; large with cæcum and appendix vermiformis and omentum, a good deal of which removed; sac ligatured and cut off.
43	—	F.	69	39 "	24 "	—	—	D.	Intestine ecchymosed and discoloured, with rupture of some superficial vessels. P.M.—Localised peritonitis, some bronchitis, and pulmonary congestion.
44	Widow	F.	72	2 "	2 days	Sac opened	Entero-epiplocele	D.	Omentum removed; phlebitis left leg. P.M.—Emphysema of lungs, cystitis, and calculous pyelitis.
45	Married	F.	42	?	14 "	"	—	D.	Omentum and small knuckle of intestine adherent to neck of sac; omentum removed and contents of sac returned; dulness on right side of abdomen before operation and

after reduction of hernia; a free flow of intestinal fluid contents, colour of pus, probably from rupture of intestine, History of case very obscure. No P.M.

Omentum removed; knuckle of intestine very dark. P.M.—Peritonitis.

Knuckle of bowel, size of hazel nut, dark colour; sac removed. P.M.—Small patch of strangulated portion appeared gangrenous, but no evident cause of death.

Irreducible; sac opened and removed; some pus in sac; adhesions firm, no attempt made to reduce.

Inflammatory symptoms in connection with swelling.

Umbilical.

Ventral.

46	"	F.	42	15 years	5 "	—	D.	after reduction of hernia; a free flow of intestinal fluid contents, colour of pus, probably from rupture of intestine, History of case very obscure. No P.M.
47	Engine driver	M.	69	15 "	4 "	—	D.	Omentum removed; knuckle of intestine very dark. P.M.—Peritonitis.
48	Labourer	M.	30	14 days	—	—	C.	Knuckle of bowel, size of hazel nut, dark colour; sac removed. P.M.—Small patch of strangulated portion appeared gangrenous, but no evident cause of death.
49	Married	F.	46	2 weeks	—	Ice	R.	Irreducible; sac opened and removed; some pus in sac; adhesions firm, no attempt made to reduce.
50	"	F.	34	9 months	—	"	R.	Inflammatory symptoms in connection with swelling.
51	"	F.	63	11 years	—	Morphia	R.	
<i>Umbilical.</i>								
52	Labourer	M.	65	6 days	5 days	Taxis; warm bath	C.	Very large, partly ventral; no constriction found.
53	Married	F.	45	8 years	4 "	Sac opened	C.	Hernia irreducible, but flaccid, not tender. P.M.—Strangulation of intestines by band passing from uterus to root of mesentery.
54	Widow	F.	74	25 "	3 "	Ice	C.	
55	Nurse	F.	74	20 "	24 hours	"	D.	
<i>Ventral.</i>								
56	Married	F.	49	12 months	—	Abdominal belt	R.	Operation for ovariectomy nine years before appearance of hernia.

SPECIAL TABLE II.—PYÆMIA.

1. Male, æt. 29. Jockey, struck leg against a post whilst racing. Transverse lacerated wound below tubercle of right tibia, comminution of that bone and a double fracture of fibula at same level, skin stripped up from wound down to fracture; washed out with carbolized solution and dressed antiseptically; some sloughing followed, and on 10th day hæmorrhage, temperature falling to 97.2° ; *amputation of thigh* in lower one third done under spray; 8 days after amputation *slight rigor*; temperature 103.8° , and an hour afterwards 105.4° , next day vomiting; 3 days later, discharge from wound, slight and granulating surface pale; tongue brown and dry; on evening of 3rd day after rigor salicylate of soda commenced, and gr. xx every four hours given; 8 doses taken, but no appreciable effect on temperature; another *rigor* followed after fifth dose, and temperature ranged from 102.6° to 106° , until 19 days after amputation, when patient died, typhoid condition, hepatic pain, and pericardial friction having been present during last 4 days of life. P.M.—*Suppurative phlebitis* of femoral vein, pericarditis, infarcts in lungs and abdominal viscera. No union of flaps.

2. Male, æt. 12. 3 days after a fall on the ice complained of pain below the left hip; was admitted 2 days after symptoms commenced, delirious, but sensible to pain, thirsty, face flushed, dry brown tongue, temperature of 103° , pulse and respiration very hurried, slight occipital headache, a tender red spot over upper part of left rectus, slight fulness below left hip, and great tenderness below trochanter major on that side; superficial redness over right shin, and tenderness over upper part of tibia and fibula, with possibly a little effusion in knee-joint; thrill over precordial region but no friction sound; linear osteotomy of left femur in position of greatest tenderness gave outlet to about 1 drachm of pus; similar operation on right leg, no result; temperature fell to 97.2° and pulse to 100 in 3 hours; slept quietly and awoke free from delirium. Next day temperature again 103° , falling to 99° after change of dressing; delirious at night, and abscess 2nd phalanx middle finger; later frequent vomiting, drowsiness, sweating, pulse 130; antiseptics left off, stimulants and quinine given; abscess in left rectus incised on 3rd day, temperature from 103° to 105° . 5th day, almost unconscious, left hemiplegia, marked pericardial friction, general râles in chest, swelling and redness over right radius and left ulna, effusion into right ankle, with swelling over tibia. No *rigors* during illness; no albuminuria; died 6th day. P.M.—*Acute osteomyelitis* of left femur, pus in tissues round knee, also in lower end of right tibia, pericarditis, pleurisy, points of suppuration in

lungs and kidneys, recent intussusception of small intestine, slight excess of fluid in ventricles of brain.

3. Male, æt. 7. No injury, quite well with exception of broken chilblain on left heel, which caused him to limp 4 days before admission; same night was hot and feverish; for one day swelling over inner side of left knee, which rapidly increased, spreading to thigh day of admission, when the temperature was $105\cdot8^{\circ}$. Swelling, œdema, and slight redness of surface from above knee to foot, great pain and tenderness, with apparently phlebitis of right saphena vein, double pleurisy, and one-sixth albumen in urine; no inflammatory signs about heel, where there is a small sore; delirium during night, noisy. Next day fluctuation above and to inner side of head of tibia; incision made and pus found behind the bone, counter-openings; continued delirious but could answer rationally if roused, vomited 3 a.m. next day and died soon afterwards. Temperature varied from $101\cdot2^{\circ}$ after incisions to $104\cdot6^{\circ}$; no rigors. P.M.—Periosteum elevated for an inch or so over posterior surface of tibia near upper epiphysis, and there was pus beneath; recent ante-mortem clot in the femoral vein, pleurisy, flaky lymph in effusion, pyæmic infarcts in heart, lungs, kidneys; other parts fairly healthy.

4. Male, æt. 66. Admitted with hard, brawny œdematous swelling, without fluctuation, involving nearly whole of right side of neck, chiefly posterior part, which had been coming on 3 weeks, with much tensive pain; had had much family trouble before that; knew of no cause. Incision made 9 days after, letting out a little pus. 14 days after incision temperature rose to $105\cdot4^{\circ}$, and right ear became red and swollen; there was also some phlebitis of right leg. Next day had two rigors, and temperature varied from $99\cdot4^{\circ}$ to $104\cdot2^{\circ}$; pain in calf of each leg, and also in wrists, followed by swelling and redness in each situation. 17th day after incision, delirious; another rigor; slight diarrhœa. 18th day.—Temperature varied $4\cdot5^{\circ}$. 20th day.—Distension of abdomen and retention of urine; no discharge from wound for 7 days, but looking well, and is not offensive. 21st.—Conscious at intervals; increased distension of abdomen; slight diarrhœa continues; motions passed involuntarily; mouth and tongue dry, and covered with black sordes; much rattling in chest. Temperature before death $102\cdot2^{\circ}$. P.M.—Pus in right shoulder and wrist-joints; softened adherent clot in right femoral vein; hypostatic congestion of lungs; no internal deposits.

5. Female, æt. 55. A month before admission a swelling appeared over back of neck, and a week before admission had been discharging; large carbuncle over left side of neck and back; much of slough already separated; temperature 104° passing much urine, sp. gr. 1021, containing sugar and albumen; no rigor; breathing hard; temperature varied from $102\cdot2^{\circ}$ to $104\cdot4^{\circ}$. Lived 4 days. P.M.—Peripheral pyæmic infarcts in lungs and localised pleurisy corresponding; viscera softened, but no recent disease; rheumatoid arthritis of knees.

SPECIAL TABLE III.—ERYSIPELAS.

(Developed in Hospital.)

1. Male, æt. 36. 2 months after removal of part of lower jaw and application of actual cautery for recurrent epithelioma; recovered from erysipelas, but died day after 2nd operation for growth 6 months afterwards. Highest temperature during attack 102.6° .

2. Female, æt. 65. 2 operations for sarcoma of leg. 19 days after 2nd operation. 1st attack. 53 days after 2nd attack, and 91 days after the 3rd. All slight. Cured.

3. Male, æt. 27. 43 days after incisions into abscess, developed in connection with sarcoma of neck. Lasted 4 days. Ultimately died from extension of growth and sloughing.

4. Male, æt. 45. 9 days after removal of lipoma of neck. Duration 18 days. Cured.

5. Male, æt. 11. 26 days after removal of congenital cyst of chest wall. Lasted 4 days. Cured.

6. Female, æt. 26. Erysipelas of face came on 18 days after operation for ruptured perinæum. No affection of wound. This was her second attack, and there was strong hereditary tendency to it. Lasted 4 days. Cured.

7. Female, æt. 25. Developed $5\frac{1}{2}$ months after incision into abscess of hip. Patient suffering from hectic. Removed by friends. Relieved.

8. Female, æt. $4\frac{1}{2}$. 51 days after excision of hip-joint. Duration 20 days. Highest temperature 104.2° . Cured.

9. Female, æt. 19. 5 days after excision of hip-joint. Lasted 10 days. Highest temperature 101.6° . A month later had abscess opened in groin, and 2nd attack of erysipelas 3 months later, lasting 7—10 days, after which she died. Amyloid degeneration of viscera.

10. Male, æt. 8. 9 days after amputation of thigh for disease of knee. Duration 3—5 days. Cured.

11. Female, æt. 27. 1st attack, lasting 3 days. Came on 3 days after scraping bone in old excision of knee. 2nd attack 17 days after amputation of thigh, lasting 10 days. 3rd attack a month later, lasting 6 days. Cured.

12. Male, æt. 35. Attack lasting 9 days. Commenced 2 days after operation for strangulated femoral hernia carried out under antiseptic precautions.

13. Male, æt. 5. After sequestrotomy for disease of tibia. Notes imperfect. Cured.

14. Male, æt. 13. Attack came on 7 months after operation for necrosis of tibia, sinuses from which still remained. Slight. Relieved.

15. Male, æt. 47. Developed 16 days after admission, in connection with necrosis of tibia; and again day after a plastic operation on leg. Cured.

16. Female, æt. 27. Admitted with necrosis of os calcis and localised redness, but no history of invasion. Day after admission sinuses probed. Next day marked erysipelas, lasting until death. 13 days after.

17. Female, æt. 27. Incision made into suppurating axillary gland before admission, and one into suppurating cervical gland after admission. 21 days afterwards erysipelas of right side of neck, spreading across face to other side, lasting 7 days. It then recurred and lasted 5 days. Cured.

18. Female, æt. 36. Glandular abscess in arm. Incised day after admission. Erysipelas 5 days after. Slight. Cured.

19. Male, æt. 36. Large scalp wound. Day after admission, temperature in evening 103.2° . Erysipelas lasting 5 days. Cured.

20. Male, æt. 4. Contused wound over right temple. 14 days after, slight attack. Cured.

21. Male, æt. 6. Scalp wound. 3 days after, slight attack. Cured.

22. Female, æt. 46. Lacerated wound of hand. 5 days after, erysipelas of arm extending to shoulder. Lasted 12 days. Cured.

23. Male, æt. 19. Bullet wound of hand. 4 days after admission. Lasted 6 days. Cured.

24. Male, æt. 23. General contusions and contused wound over right elbow. 2 days after admission. Lasted 5 days. Cured.

25. Male, æt. 33. Severe contusion of foot, followed by sloughing. 25 days after admission. Lasted 5 days. Cured.

26. Male, æt. 65. Subcoracoid dislocation of humerus, and slight laceration of skin in axilla; unsuccessful attempt at reduction. 6 days after admission, preceded by general œdema of arm. In hospital 49 days. P.M.—Contracted granular kidneys.

27. Male, æt. 21. Compound fracture of tibia. Sequestrum extracted. 2 days afterwards, and lasted 7 days. Cured.

28. Female, æt. 24. Extensive burns. Came on 5 days after admission, and lasted till death, 9 days after onset of erysipelas.

29. Female, æt. 13. Came on 2 days after admission for scald of legs. Lasted 6 days. Cured.

30. Female, æt. $2\frac{1}{2}$. 8 days after incision for glandular abscess of arm. Lasted 8 days; slight. Cured.

31. Male, æt. 42. 18 days after counter-opening for large abscess of thigh. Lasted 13 days. Cured.

32. Male, æt. 45. 5 days after incision opening up sinuses in buttock. Lasted 3 days. Cured.

33. Male, æt. 42. 43 days after admission for ulcers of legs. Lasted 5 days. Cured.

34. Nurse, æt. 26. Face; 2nd attack; no wound. Lasted 6 days. Cured.

35. Nurse, æt. 24. Face and ears. Lasted 8 days. No wound. Cured.

OPHTHALMIC REPORTS.

STATISTICAL REPORT

OF

THE OPHTHALMIC DEPARTMENT

FOR THE YEAR 1880.

By A. D. DAVIDSON, M.D.,
LATE OPHTHALMIC CLINICAL ASSISTANT.

DURING the year there were 2647 new patients (exclusive of renewed letters). 246 in-patients were admitted, and 233 major operations performed.

Analysis of In-patients admitted during 1880.

Phlyctenular conjunctivitis	1	Gumma of iris	1
Gonorrhœal ophthalmia	1	Cataract, senile	25
Granular lids	2	„ soft	8
Symblepharon	2	„ lamellar	2
Anchyloblepharon	1	„ congenital	1
Ulcer of cornea	29	„ secondary	7
Pannus	3	„ traumatic	6
Staphyloma corneæ	2	„ anterior polar	1
Adherent leucoma	4	Dislocation of lens	1
Nebula	4	Glaucoma, acute	3
Anterior synechia	2	„ subacute	1
Keratitis, heredito-syphilitic	20	„ chronic	3
„ non-syphilitic	1	„ absolute	1
Pterygium	1	„ secondary	2
Iritis, syphilitic	6	Atrophy of optic nerve	8
„ rheumatic	10	Choroido-retinitis, syphilitic	3
„ not classed	4	Detachment of retina	2

Tobacco amblyopia	1	Sycosis tarsi	1
Hypermetropia	7	Entropion	2
Myopia	5	Coloboma of eyelid	1
Strabismus, convergent	1	Congenital ptosis	2
„ divergent	3	Mucocele	2
Paralysis of third nerve	3	Lacrimal abscess	2
Myosis	1	Sebaceous cyst	2
Wound of eyeball (complicated)	5	Dermoid cyst	1
„ sclerotic	1	Sympathetic inflammation	1
Burn of eye	4	Readmissions	25
Panophthalmitis	3		—
Lost eyes	4		246
Buphthalmos	1		

*Operations performed during 1880.**(The figures refer to the number of eyes.)*

Removal of cataract—46.

„ by extraction	32
„ „ suction operation	9
„ „ discission for lamellar cataract	1
„ „ „ „ congenital „	2
„ „ „ „ traumatic „	2
Discission for ripening cataract (eyes)	2
„ after extraction „	12
Iridotomy	5
Iridectomy—39 :	
„ for acute glaucoma	3
„ „ subacute „	2
„ „ chronic „	3
„ „ absolute „	2
„ „ secondary „	6
„ „ iritis	6
„ preliminary to extraction of cataract	1
„ for artificial pupil after extraction of cataract	4
„ other cases of artificial pupil	9
„ by Carter's method	3
Sclerotomy	4
Division of anterior synechia	6
Tenotomy of internal rectus	29
„ „ external „	13
Advancement of internal rectus	6
„ external „	1
Congenital ptosis	2
Coloboma of lid	1
Pterygium	1
Rodent ulcer	1

Paracentesis of sclerotic in detached retina	3
Peritomy	1
Enucleation	34
Operations on the eyelids	7
Various	11

Many minor operations, chiefly done in the out-patient room (lacrimal strictures, meibomian cysts, &c.), not recorded.

Analysis of Cataract Operations.

In the following cases of cataract extraction the section was made upwards in all except Case 19, where it was made outwards, and in Case 25, where it was made downwards.

In Case 25 no iridectomy was made ; in Case 27 an iridectomy was made for subacute glaucoma seven weeks previous to extraction ; in all the other cases an iridectomy was made at the time of the operation.

In all the cases the pupil was contracted with eserine before the operation, and in Cases 16, 23, 26, 28, 29, 30, 31, and 32, this myotic was also used twice or three times during the forty-eight hours following the operation. The dressing used was a piece of dry linen and a pad of absorbent cotton wool kept in position with a knitted Liebreich's bandage, unless in Column 7 a flannel one is stated to have been used. Atropine was always commenced on the third day, being used once daily until about the tenth day, and, of course, more often if there were iritis.

In the cases of removal of cataract by suction, Bowman's syringe was always used, and the cases treated by the constant application of cold, by means of lint wetted with ice-cold water and frequently changed, the pupil being kept widely dilated with atropine.

In addition to the cases tabulated below, 5 cataracts were needled, viz. 2 traumatic, 2 congenital, and 1 zonular.

In one of the traumatic cataracts there was threatened suppuration with hypopyon and increased tension, so an iridectomy was performed on the day after the injury, which completely relieved the symptoms, and it was needled one year after the injury on account of some membrane remaining in the pupil. All the cases did well, but it is impossible to give the resulting sight, as the patients were either too young to take the vision, or else they did not return to have it tried.

Analysis of Cataract Extractions performed during 1880.

No.	Name.	Sex.	Age.	Anæsthetic.	Vomiting.	Operation and dressing.	Progress of case.	Secondary operation.	Result.
1	E. D. Jan. 16th	M.	65	Chloroform	Commenced retching at finish of operation and became violent	Extraction of right upward with iridectomy; amber nucleus; cortex removed afterwards	Choroidal hæmorrhage commenced one hour after operation; flannel bandage	—	Enucleation 3 days after extraction.
2	M. H. Jan. 23rd	F.	45	None	—	Extraction of right upward with iridectomy; cataract soft all through; no nucleus	Favorable; much softer left	Needled twice 3 months and 7 months after extraction	11 months after extraction $S = \frac{2.0}{4.0}$ and 1 J.; astig. 1 D.
3	H. O. Feb. 6th	F.	55	Ether then chloroform	Slight vomiting at completion of operation	Extraction of right upward with iridectomy; some bleeding into a. c.	Slight iritis; treated by atropine and blisters	—	5 weeks after extraction $S = \frac{2.0}{10.0}$ and 1 J.; synechia at outer end of corneal incision.
4	C. B. Feb. 13th	M.	74	Chloroform	No vomiting	Extraction of left upward with large iridectomy; corneal incision made without anæsthetic; flannel bandage	Suppuration commenced 18 hours after operation	—	Enucleation 5 weeks after extraction. This patient had albuminuria and old specific iritis and choroiditis, and was very restless.
5	E. G. Feb. 27th	F.	63	None	—	Extraction of left upward with iridectomy; cortex partly fluid	Wound healed rather slowly, otherwise favorable	—	3 months after extraction, $S = \frac{2.0}{10.0}$ and 1 J.; synechia at outer end of wound.
6	W. L. March 5th	M.	48	None	—	Extraction of left upward with iridectomy; small escape of vitreous before extraction of lens; flannel	Slight iritis	—	1 month after extraction $S = \frac{2.0}{6.0}$ and 1 J.; astig. $= \frac{1}{14}$.

March 12th					with iridectomy; section very corneal	otherwise favorable		tion S = $\frac{2}{10}$ and 16 J.; synechia at inner end of corneal section.
8 S. G. April 9th	F. 66	"	—	—	Extraction of right upward with iridectomy; small escape of vitreous, which was rather fluid; flannel bandage	Slight iritis; otherwise favorable	—	Does not know letters, so cannot accurately estimate vision.
9 J. D. April 16th	F. 59	Chloroform	Was sick during operation and for several hours after	Extraction of left upward with iridectomy; some soft matter left	Extraction of left upward with iridectomy; flannel bandage	Slight iritis; treated with atropine and blisters	—	6 weeks after operation S = $\frac{2}{10}$ and 1 J.; synechia at inner end of corneal incision.
10 M. C. April 30th	F. 36	Ether then chloroform	Vomited at finish of operation	Extraction of right upward with iridectomy; flannel bandage	Uninterrupted		—	3 weeks after operation S = $\frac{2}{10}$ and 1 J.; synechia at outer end.
11 E. K. May 7th	F. 52	Ether	No vomiting	Extraction of left upward with iridectomy; flannel bandage	Slight iritis; treated with atropine and blisters		—	6 weeks after operation S = $\frac{2}{10}$ and 1 J. Iris was tremulous before operation.
12 A. D. May 11th	F. 21	"	—	Attempted suction of left after a preparatory needle the day before; then extraction upward with large iridectomy; part of lens removed with scoop; eyeball much collapsed	Eye recovered well from operation; no iritis		—	Only bad p. l.; front of vitreous puckered. This patient had large central patch of choroidal atrophy in the other eye.
13 F. B. May 14th	F. 66	None	Felt sick all the night of operation and vomited the following morning	Extraction of left upward with iridectomy; flannel bandage	Slight iritis; treated with atropine		—	6 weeks after operation S = $\frac{2}{10}$ and 1 J.; a posterior synechia.
14 G. P. June 4th	M. 30	"	—	Extraction of right upward with iridectomy; lens did not present; escape of vitreous; lens removed with scoop, much cortex remained; flannel bandage	Slight iritis	Needed twice, 7 weeks and 9 weeks after extraction		3½ months after extraction S = $\frac{2}{10}$ and 6 J.; irides of different colors, has known it many years; R. blue, L. greenish; L. no cataract.

No.	Name.	Sex.	Age.	Anæsthetic.	Vomiting.	Operation and dressing.	Progress of case.	Secondary operation.	Result.
15	J. G. June 11th	M.	48	None	—	Extraction of right upward with iridectomy; much bleeding into a. c.; some soft matter left; flannel bandage	Slight iritis	1 month after extracting needle 2 months after mem. divided, 6 months after mem. removed	7 months after extraction, cannot count fingers; opacities in vitreous; patient had a blow on eye 2 years previously.
16	R. J. June 25th	F.	63	Chloroform	No vomiting	Extraction of right upward with iridectomy; flannel bandage	Eserine used twice daily for first 2 days; slight iritis, treated with atropine and blisters	—	2 months after extraction $S = \frac{20}{200}$ and 1 J. Opacs. in vitreous 2 mos. later $S = \frac{20}{100}$ and 10 J.
17	M. S. July 9th	F.	63	"	Slight retching and vomiting	Extraction of right upward with iridectomy	Slight iritis; treated with atropine and blisters	—	7 weeks after extraction $S = \frac{20}{100}$ and 4 J.; slight membrane in pupil; synechia at outer end of section.
18	A. R. July 30th	F.	76	None	—	Extraction of right upward with iridectomy	Very slight iritis; treated by atropine	—	10 weeks after extraction $S = \frac{20}{70}$ and 6 J.; some membrane in pupil; synechia at outer end of section.
19	J. M. July 8th	M.	19	Ether	Very sick for $\frac{1}{2}$ hour after operation	Right cataract needled 3 days previously; attempted suction; then extracted outwards with iridectomy; lens removed with scoop	Treated with atropine every 2 hours, and cold constantly; severe iritis; then leeches, hot fomentations, and blisters; paracentesis	3 months after extraction p. occluded; second iridectomy 6 mos. later giving $S = \frac{20}{70}$ and 10 J.	3 weeks after iridectomy, p. occluded; second iridectomy 6 mos. later giving $S = \frac{20}{70}$ and 10 J.
20	J. M. (same as Case 19) August 6th	M.	19	"	No vomiting	Preparatory needle 3 days previously; extraction of left upward with iridectomy	Uninterrupted	—	11 weeks after extraction $S = \frac{20}{70}$ and 1 J.; astig. 1.25 D.

22	Sept. 17th	F.	24	Ether	Slight vomiting	Extraction of left upward with iridectomy	Favorable	—	6 weeks after extraction S = $\frac{2}{7}$ and 2 J.; slight membrane in pupil.
23	A. L. Sept. 24th	F.	66	Ether then chloroform	—	Extraction of right upward with iridectomy; eserine used at end of operation	Slight iritis; treated with atropine and blisters	—	6 weeks after extraction S = $\frac{2}{4}$ and 1 J.; synechia at outer end of wound.
24	W. M. Oct. 15th	M.	50	None	—	Extraction of left upward with iridectomy	Favorable	Needed 5 months after extraction	6 weeks after needling S = $\frac{2}{6}$ and 1 J.
25	M. D. Oct. 19th operation by Mr. Davidson	F.	72	Chloroform	Slight vomiting	Extraction of left downward corneal section; no iridectomy; slight escape of vitreous; flannel bandage	Favorable; only atropine irritation	—	1 month after extraction S = $\frac{2}{6}$ and 1 J.; anterior synechia
26	D. M. Oct. 22nd	M.	60	—	No vomiting	Extraction of right upward with iridectomy; eserine used at end of operation; flannel bandage	Slight iritis	7 weeks after extraction memb.	Patient Welsh, cannot read English, but sees well
27	S. L. Oct. 29th operation by Mr. Davidson	F.	80	—	Slight vomiting and a good deal of retching for some hours after operation	Iridectomy for subacute glaucoma 7 weeks previous to extraction; extraction of left upward with iridectomy	Slight iritis, and eye remained tender and irritable with — tension	—	6 weeks after extraction S = good p. l.; could not count fingers; some opaque matter in pupil.
28	J. D. Nov. 5th (same as Case 9)	F.	59	—	Vomited during and for some hours after operation	Extraction of right upward with iridectomy; eserine used after operation; flannel bandage	Favorable, except atropine irritation	—	1 month after extraction S = $\frac{2}{6}$ and 2 J.

No.	Name.	Sex.	Age.	Anesthetic.	Vomiting.	Operation and dressing.	Progress of case.	Secondary operation.	Result.
29	E. H. Nov. 12th	F.	63	Chloroform	Slight vomiting for $\frac{1}{2}$ hour after operation	Extraction of left upward with iridectomy; eserine used after operation	Slight iritis	—	3 months after extraction $S = \frac{2.0}{4.0}$ and 1 J.; astig. 1.75 D.
30	M. S. Nov. 16th	F.	67	"	—	Extraction of left upward with iridectomy; no speculum used; eyes very prominent; flannel bandage; eserine used after operation	Favorable	—	1 month after extraction $S = \frac{2.0}{4.0}$ and 4 J.; astig. 1 D.
31	E. H. Dec. 3rd (same as Case 29)	F.	63	"	Was sick for 2 hours after operation	Extraction of right upward with iridectomy; eserine used after operation; flannel bandage	Extraction, followed by severe iritis with hypopyon; treated by blisters; fomentation; atropine	—	Not noted.
32	M. S. Dec. 22nd (same as Case 30)	F.	67	None	—	Extraction of right upward with iridectomy; eserine used after operation; flannel bandage	Some iritis	—	3 weeks after extraction $S = \frac{2.0}{10.0}$ and 4 J.

Analysis of Cataracts removed by Syringe during 1880.

1	G. S. Feb. 3rd	M.	26	Ether	No vomiting	Left needed 4 days previously; some lens matter remaining after operation	Operation, followed by iritis and plastic cyclitis and hypopyon; treated by atropine, leeches and hot fomentations, and paracentesis	5 months after operation iridectomy; 6 months iridotomy	7 months after operation $S = \frac{2.0}{20.0}$ and 14 J.
2	A. M. April 23rd	F.	7	"	"	Left needed 1 day previous; some lens matter left	Favorable	—	Too young to test sight.
3	G. B. June 9th	M.	3 $\frac{1}{2}$	"	"	Left needed 2 days previous; all visible lens matter	Ditto	—	Ditto.

4	G. B. July 2nd (same as Case 3)	M. 3 $\frac{3}{4}$	"	"	Right needled 3 days previously	Slight pain and redness of eye following day	—	Ditto.
5	J. H. Oct. 8th	M. 27	Ether then chloroform	"	Right needled same time; some lens matter escaped at side of syringe; all lens not removed	Favorable	—	No result recorded.
6	S. P. Oct. 19th	F. 18	Ether	"	Right needled 4 days previous; all lens not removed	Ditto	—	2 months after operation S = $\frac{2}{3}$ 0 and 2 J.; P. black; astig. 2 D. 3 months after operation S = $\frac{2}{4}$ 0 and 1 J.
7	E. P. Oct. 26th	M. 25	"	"	Traum. cat.; blow with chip of iron on May 26th; no perforation; left needled 4 days previous; all lens not removed	Patient had atropine irrigation, so Duboisin gr. j to oz. and then daturine gr. iv to oz. was used instead; progress favorable	—	
8	G. S. Nov. 2nd	M. 30	Ether then chloroform	Vomited on table and retched for some hours afterwards Vomited on table before and after operation	Right needled same time; all lens matter not removed; small escape of vitreous	Favorable	—	1 month after operation S = $\frac{2}{4}$ 0 and 1 J.; astig. 1.25 D.
9	S. P. Nov. 9th (same as Case 6)	F. 18	Ether		Left needled 4 days previous; all lens not removed	Slight iritis followed; treated by atropine blisters and warm wool	—	7 weeks after operation S = $\frac{2}{6}$ 0 and 1 J.; still some lens matter unab-sorbed.

STATISTICAL REPORT

OF

THE OPHTHALMIC DEPARTMENT

FOR THE YEAR 1881.

BY J. B. LAWFORD,
OPHTHALMIC CLINICAL ASSISTANT.

DURING the year there were 2620 new patients (exclusive of renewed letters). 255 in-patients were admitted, and 252 major operations performed.

Analysis of In-patients.

Phlyctenular conjunctivitis	2	Cataract, lamellar	3
Mucopurulent ophthalmia	3	„ congenital	3
Purulent ophthalmia	1	„ posterior polar	1
Symblepharon	1	„ secondary	2
Ulcer of cornea	22	„ traumatic	2
Abrasion of cornea	1	Membrane after extraction of	
Pannus from granular lids	10	cataract	7
Nebula	3	Dislocated lens	1
Adherent leucoma	4	Glaucoma, acute	3
Anterior synechia	2	„ subacute	1
Anterior staphyloma	1	„ chronic	7
Conical cornea	1	„ absolute	1
Keratitis, heredito-syphilitic	12	„ secondary	3
„ punctata	3	Optic neuritis	2
Kerato-iritis	3	Atrophy of optic nerve (primary)	3
Iritis, syphilitic	1	„ „ (post-papillitic)	1
„ rheumatic (recurrent)	9	Retinitis, syphilitic	3
„ not classed	3	Detached retina	1
Irido-cyclitis	2	Amblyopia (unclassified)	3
Episcleritis	1	Hypermetropia	1
Cataract, senile	30	Strabismus, convergent	2
„ soft	4	„ divergent	6

Ruptured inferior rectus tendon	1	Entropion	2
Wound of eyeball (complicated)	18	Congenital ptosis	1
„ of sclerotic	2	Mucocele	1
Burn of eye	3	Sympathetic irritation	1
Orbital cellulitis	2	„ inflammation	2
Intraorbital tumour	2	Herpes frontalis	3
Lost eyes	8	Miner's nystagmus	1
For partial union of lids	2	Readmissions	24
Trichiasis	6		—
Ectropion	1		255

*Operations performed during 1881.**(The figures refer to the number of eyes.)*

Removal of cataract—51 :

„ by extraction	48
„ by suction operation	3
Discission after extraction	8
Iridotomy	14

Iridectomy—41 :

„ for acute glaucoma	4
„ for subacute „	1
„ for chronic „	8
„ for absolute „	1
„ for secondary „	1
„ for iritis	5
„ preliminary to extraction of cataract	1
„ for artificial pupil after extraction of cataract	2
„ for other cases of artificial pupil	18
Sclerotomy	6
Division of anterior synechia	1
Trephining for conical cornea	1
Removal of apex of cone in do.	1

Tenotomy of internal rectus—42 :

„ Liebreich's method	31
„ Critchett's „	11
Tenotomy of external rectus	2
„ of inferior „	1
„ of superior „	2
Advancement of internal rectus	6
„ of inferior „	1
Peritomy	15
Enucleation	36
Operation for congenital ptosis	2
„ for shortening palpebral fissure	4
„ for ectropion	1
„ for entropion	1

Operation for trichiasis	10
„ for symblepharon	1
Removal of necrosed malar bone	1
Nerve stretching for after-pain of herpes frontalis	2
Excision of portions of nerves for do.	1

Many minor operations performed in the out-patient room (for lacrimal abscess and stricture, Meibomian cysts, &c.) are not recorded.

Analysis of Operations for Cataract.

I. Extractions of hard cataract—36.

Of the cases in this table the section was made upwards in nearly all. In Nos. 2 and 32 it was made outwards, and in 7, 13, 23, and 35 downwards. In all, save three, an iridectomy was performed at the time of extraction. In Case 7 no iridectomy was made, and in Cases 13 and 32 an iridectomy had been previously made elsewhere. In the greater number of the cases (see Tables) the pupil was contracted, previous to operation, by eserine. This myotic was also used four times in the forty-eight hours following the operation. In Nos. 2, 7, 13, 23, 30, 32, 34, 35, 36, no eserine was used after the operation. In Nos. 7, 13, and 35 atropine, and in No. 30 duboisin, was used before the operation.

With the exception of Case 30 (in which duboisin was used), and Cases 33 and 36 (in which no mydriatic was used), atropine was always commenced on the third day after the operation, and used twice daily for a week or ten days, or more often if iritis set in.

The dressing in all cases was a piece of dry linen and a pad of absorbent cotton-wool, kept in position by a flannel bandage.

II. Cases of removal through a small corneal incision (“linear extraction”) and suction—15.

In these cases the pupil was always dilated by atropine previous to the operation. Most of the cases were treated by the constant application of cold by means of lint wetted with ice-cold water and frequently changed.

In Nos. 38, 39, 40, 41, 43, and 45, however, a dry compress was applied, but atropine was always used frequently.

In the cases in which suction was performed Bowman’s syringe was used.

TABLE I.—*Extractions of Hard Cataract—36.*

No.	Name. Date.	Sex.	Age.	Anæsthetic.	Vomiting.	Operation.	Progress of case.	Secondary operation.	Result.
1	J. H. Jan. 7th	M.	55	Ether then chloroform	Vomiting while on the table	Extraction of right upwards with iridectomy; lens re- moved in the capsule; escape of vitreous; eserine before operation	Favorable	—	4 weeks after extraction $V = \frac{20}{40}$ and 1 J.; astig. 1 D.
2	J. Q. Jan. 14th	M.	51	None	—	Extraction of right out- wards through old iridec- tomy; hard nucleus; cor- tex removed afterwards	Atropine produced irrita- tion; patient had old granular lids and nebulous corneæ	Irido- tomy 3 months after ex- traction	8 months after extraction $V = \frac{20}{100}$ and 14 J.
3	J. S. Jan. 28th	M.	40	None	—	Extraction of right upwards with iridectomy; lens throughout like half-boiled sago; eserine before opera- tion	Favorable	—	3 weeks after extraction $V = \frac{20}{40}$ partly and 1 J.
4	S. J. Feb. 11th	F.	56	None	—	Extraction of left upwards with iridectomy; lens hard and chippy; eserine before operation	Slight iritis	—	5 weeks after extraction $V = \frac{20}{30}$ and 1 J.; astig. 2.5 D.
5	J. W. Mar. 11th	M.	66	None	—	Extraction of left upwards with iridectomy; hard nu- cleus; soft cortex; eserine before operation	Iritis; pupil blocked by membrane; patient very troublesome	Irido- tomy 6 weeks after ex- traction	10 weeks after extraction $V = \frac{20}{40}$ and letters of 1 J.; patient only knows the letters, cannot read.
6	C. E. L. Mar. 15th	F.	63	Ether then chloroform	None	Extraction of left upwards with iridectomy; lens hard throughout; eserine before operation	Favorable	—	8 weeks after extraction $V = \frac{20}{40}$ partly and 1 J.; astig. 1.5 D.
7	R. J. Mar. 18th	M.	38	None	—	Extraction of left down- wards; no iridectomy; lens removed by spoon; atro- pine before operation	Slight iritis	—	3 weeks after extraction $V = \frac{20}{40}$ and 18 J.; old traumatic cataract; lens

8	J. H. Mar. 25th	F.	64	Chloro- form	None	Extraction of left upwards with iridectomy; eserine before operation	Favorable	—	7 weeks after extraction V = $\frac{20}{60}$ and 2 J.
9	H. P. April 1st	F.	60	"	Coughing and vomiting while on the table and after return to the ward	Extraction of right upwards with iridectomy; hard nu- cleus; cortex semi-fluid; eserine before operation	Favorable	—	7 weeks after extraction V = $\frac{20}{60}$ and 4 J.; thin membrane in pupil.
10	W. K. April 5th	M.	76	"	None	Extraction of left upwards with iridectomy; much soft matter removed; ese- rine before operation	Wound healed well, but re- opened in a few days	—	An attack of mania super- vened 4 days afterwards, and patient was removed to the Infirmary; result unknown.
11	A. W. April 8th	F.	62	"	Was very sick after the operation	Extraction of right upwards with iridectomy; a good deal of soft cortex; eserine before operation	Moderate iritis	—	7 weeks after extraction V = $\frac{20}{60}$ and 1 J.
12	M. A. B. May 3rd	F.	61	None	—	Extraction of left upwards with iridectomy; hard nu- cleus with soft cortex; eserine before operation	Suppuration commenced 40 hours after operation	—	Eye destroyed by panoph- thalmitis
13	J. H. May 4th	F.	55	Ether	None	Extraction of left down- wards through an old iridec- tomy; iris adherent to lens separated by spud; lens ex- tracted by spoon; a small escape of vitreous; atropine before operation	Favorable	—	4 weeks after extraction V = 20 J.; patient had had severe double syphi- litic iritis; final result unknown.
14	M. A. A. May 6th	F.	71	Ether then chloroform	Vomited at conclusion of operation	Extraction of left upwards with iridectomy; eserine before operation	Slight iritis	—	7 weeks after extraction V = $\frac{20}{40}$ partly and 1 J.
15	C. F. May 9th	M.	76	None	—	Extraction of left upwards with iridectomy; eserine before operation	Favorable; thin membrane in pupil	Needed 15 weeks after ex- traction	4 months after extraction V = $\frac{20}{40}$ and 1 J.

No.	Name. Date.	Sex.	Age.	Anæsthetic.	Vomiting.	Operation.	Progress of case.	Secondary operation.	Result.
16	S. T. May 11th	F.	62	None	—	Extraction of right upwards with iridectomy; lens very hard, overripe; eserine be- fore operation	Slight iritis		10 months after extrac- tion $V = \frac{2}{6}$ and 1 J.; astig. 2 D.
17	L. W. May 13th	F.	40	Ether then chloroform	Vomited im- mediately after opera- tion and again in a few hours	Extraction of right upwards with iridectomy; vitreous presented and escaped as soon as capsule was opened; lens removed by scoop; eserine before operation	Moderate iritis; treated by blisters and atropine	—	5 months after extraction $V = \frac{2}{6}$ and 1 J.
18	S. F. May 18th	F.	49	Ether then chloroform	Much cough- ing during operation; vomited for some hours afterwards	Extraction of left upwards with iridectomy; vitreous presented and escaped be- fore lens; lens removed by scoop; eserine before ope- ration	Vitreous prolapsed into wound which healed over it; eye remained painful and tender	Excision 4 months after extraction. Detachment of retina and subchoroidal hœmor- rhage found.	
19	J. S. May 25th	F.	57	None	—	Extraction of right upwards with iridectomy; a good deal of soft matter left in pupil; eserine before ope- ration	Favorable	—	7 weeks after extraction $V = \frac{2}{7}$; astig. 1 D.
20	W. S. June 10th	M.	65	None	—	Extraction of right upwards with iridectomy; eserine before operation	Favorable	—	5 weeks after extraction $V = \frac{2}{7}$ and 1 J. imper- fectly.
21	J. H. June 14th	M.	51	Ether then chloroform	None	Extraction of right upwards with iridectomy; much soft matter; some left in pupil; eserine before operation	Rather severe iritis; was a very troublesome patient	4 months after ex- traction irido- tomy. A month later membrane removed from pupil with iris for- ceps.	5½ months after extrac- tion $V = \frac{2}{6}$ and words 4 J.; is a bad reader.
22	J. P. G. Aug. 17th	M.	49	„	Slight vomiting	Extraction of right down- wards through an old iri- dectomy. lens removed by	Favorable	—	3 weeks after extraction $V = \frac{2}{7}$ and 1 J.; astig.

23	S. H. Aug. 23rd	F.	60	Chloro- form	None	scoop; a small piece more iris removed; eserine be- fore operation Extraction of left upwards with iridectomy; iris ad- herent; lens removed by scoop; small escape of vitreous	Pupil became blocked by membrane; atropine pro- duced irritation	Irido- tomy 5 months after ex- traction	Detachment of retina; eye shrunk; no p. l.
24	H. H. Aug. 25th	F.	63	"	None	Extraction of right upwards with iridectomy; hard nu- cleus; much soft cortex removed afterwards; ese- rine before operation	Favorable; thin membrane in pupil	Needed 3 weeks after ex- traction	Patient cannot read; 4 weeks after extraction "sees letters" $\frac{20}{60}$ and 1 J.; clear pupil
25	J. I. Aug. 26th	M.	69	"	None	Extraction of right upwards with iridectomy; eserine before operation	Favorable; thin membrane in pupil	Needed 3 weeks after ex- traction	4 months after extraction $V = \frac{20}{60}$ and 4 J.
26	S. T. Aug. 30th (same as Case 16)	F.	62	None	—	Extraction of left upwards with iridectomy; much bleeding into a. c.; eserine before operation	Slight iritis	—	8 months after extraction $V = \frac{20}{60}$ and 2 J.; astig. 2 D.
27	R. A. S. Sept. 2nd	M.	49	Ether then chloroform	Much vomit- ing afterwards	Extraction of right upwards with iridectomy; lens soft and removed piecemeal; eserine before operation	Iritis; treated by atropine and blisters; was a very troublesome patient	—	Deep extensive detach- ment of retina followed the operation; patient was very myopic and had extensive detached retina in the other eye; not benefited by operation. 5½ months after extrac- tion $V = \frac{20}{40}$ partly and 1 J.
28	E. M. Sept. 6th	F.	64	None	—	Extraction of right upwards with iridectomy; lens very hard; bleeding into a. c.; eserine before operation	Favorable; thin membrane in pupil	Needed 5 months after ex- traction	Result perfect: no mem- brane in pupil; v. never tested; patient died a few weeks afterwards of surgical kidneys conse- quent on cystitis.
29	A. H. Sept. 9th	M.	70	Chloro- form	Slight vomit- ing	Extraction of left upwards with iridectomy; lens large; bleeding into a. c.; eserine before operation	Slight iritis	—	

No.	Name. Date.	Sex.	Age.	Anæsthetic.	Vomiting.	Operation.	Progress of case.	Secondary operation.	Result.
30	M. A. S. Sept. 20th	F.	64	Chloro- form	None	Extraction of left upwards with iridectomy; much soft cortex; nucleus hard; du- boisin before operation	Very severe iritis; pupil completely filled up by lymph	Iridec- tomy 4 months after ex- traction	Bare p. l., eyeball shrunk- en.
31	M. W. Oct. 5th	F.	49	None	—	Extraction of left upwards with iridectomy; hard small nucleus; much soft cortex; eserine before ope- ration	Favorable; thin membrane in pupil	Needed 3 weeks after ex- traction	5 weeks after extraction $V = \frac{2}{0}$ partly and 6 J.; astig. 1.5 D.
32	W. S. Nov. 11th	M.	51	Ether	—	Extraction of right outwards through old iridectomy; lens removed by scoop	Pupil became filled by a dense yellowish mass	Irido- tomy 3 months after ex- traction	4 months after extraction $V = 20$ J. badly; leucoma lower half of cornea.
33	E. W. Nov. 15th	F.	55	None	—	Extraction of right upwards with iridectomy; very free bleeding; lens small and hard; eserine before ope- ration	Moderate iritis; small pro- lapse of iris at inner end of wound	Needed 6 months after ex- traction	6 months after extraction $V = \frac{2}{0}$ and 1 J.
34	M. W. Nov. 24th	F.	56	"	—	Extraction of right upwards with iridectomy; lens hard and large	Favorable; thin membrane in pupil	Needed 6 weeks after ex- traction	7 weeks after extraction $V = \frac{2}{0}$ partly and 6 J.
35	P. M'D. Dec. 10th	M.	33	Ether then chloroform	None	Extraction of left downwards with iridectomy; Morgag- nian cataract; atropine before operation	Favorable	—	Good result; patient can- not read; pupil quite clear.
36	M. W. Dec. 10th (same as Case 34)	F.	56	None	—	Extraction of left upwards with iridectomy; lens amber; came out clean	Favorable; thin membrane in pupil	—	3 weeks after extraction $V = \frac{2}{0}$ partly and 6 J. letters.

TABLE II.—Cataract removed by Linear Extraction and Suction—15.

37	F. W. May 3rd	M. 13	Ether	Vomited for several hours afterwards	Right eye; linear extraction upwards; no iridectomy; lens needed four days previously	Favorable; some soft matter in pupil	Iridotomy 4 months after extraction	4½ months after extraction $V = \frac{2.0}{\pm 0}$ and 1 J.
38	E. W. May 13th	M. 5	"	Slight vomiting afterwards	Right eye; linear extraction upwards; no iridectomy; lens shrunken, removed by iris forceps; escape of vitreous	Favorable; but eye remained irritable for some time	—	Good result, patient too young to test sight.
39	J. A. S. Aug. 12th	M. 16	"	No note as to vomiting, probably none	Attempted suction of left; lens too hard; extraction upwards, with iridectomy; traumatic cataract	Favorable; some soft matter in pupil	—	4 weeks after extraction $V = \frac{2.0}{\pm 0}$ and 10 J.
40	C. R. Aug. 19th	M. 5	"	Vomited for some hours afterwards	Extraction upwards of left; shrunken lens, partly removed by iris forceps; iridectomy; small escape of vitreous	Prolapse of iris at angle of wound; cut off two days later	—	Apparent good result; too young to test sight; pupil drawn up towards wound.
41	J. S. Aug. 19th	M. 22	Ether then chloroform	None	Extraction of right upwards; shrunken remains of traumatic cataract; small escape of vitreous	Favorable	—	9 weeks after extraction $V = 18$ J.; secondary operation required.
42	F. W. Sept. 13th (same as Case 37)	M. 13	Ether	No note as to vomiting	Left eye; linear extraction downwards; no iridectomy; all lens substance not removed; lens needed 4 days previously	Favorable	—	3 months after extraction $V = \frac{2.0}{\pm 0}$ partly, and 1 J. with difficulty.

No.	Name. Date.	Sex.	Age.	Anæsthetic.	Vomiting.	Operation.	Progress of case.	Secondary operation.	Result.
43	E. W. Oct. 7th (same as Case 38)	M.	5	Ether	Was very sick for several hours after the operation	Left eye; linear extraction of remains of shrunken lens upwards; no iridec- tomy; large escape of vit- reous; membrane left in pupil	Favorable	Irido- tomy 3 weeks after ex- traction	Apparent good result; too young to test sight.
44	W. D. Nov. 4th	M.	6	"	None	Left eye; linear extraction outwards; no iridectomy; lens needed 5 and 8 days previously	Favorable	Needed 2 months after ex- traction	Good result; too young to test sight.
45	P. McD. Nov. 4th (same as Case 35)	M.	33	"	Slight sick- ness	Right eye; attempted suc- tion; incision enlarged and lens squeezed out; small iridectomy	Suppuration began 24 hours after operation; eye des- troyed by panophthalmitis	Excision 9 days after ex- traction	—
46	G. S. Nov. 13th (same as Case 1 of Suction Cases in 1880)	M.	28	None	—	Right eye; extraction through linear incision outwards; pupillary border of iris removed; lens needed 2 days previously	Slight iritis; fenestrated membrane in pupil	Needed 3 months after ex- traction	3 months after extraction V = $\frac{20}{40}$ and 1 J.
47	G. A. Nov. 22nd	F.	11 m.	Chloro- form	Was sick after operation	Linear extraction of right outwards; small iridectomy; lens needed 4 days pre- viously	Favorable	4 weeks later iri- dectomy	Good result, clear arti- ficial pupil.
48	W. F. Dec. 13th	M.	6	Ether	Vomited after return to ward	Linear extraction of right downwards, through colo- boma of preliminary iridec- tomy	Iritis; pupil blocked by membrane	—	Perception of light only —probable deeper dis- ease—patient was the subject of hereditary syphilis; other eye to- tally blind.
49	E. S. May 2nd	F.	34	"	None	Left lens removed by suc- tion; needed 2 days pre- viously	Slight iritis; a good deal of soft matter in pupil	—	4 weeks after extraction V = words 16 J.; not $\frac{20}{200}$; patient not seen again

50	R. V. May 20th	M. 29	None	—	Right lens removed by suc- tion; needled immediately before	Favorable	—	No result recorded; pa- tient never returned to hospital after leaving the ward.
51	F. W. Oct. 25th	F. 8½	Ether	None	Right lens removed by suc- tion; needled 4 days pre- viously	Favorable; a good deal of opaque matter in pupil	—	Too young to test sight.

PRINTED BY
J. E. ADLARD, BARTHOLOMEW CLOSE.

St. Thomas's Hospital MEDICAL SCHOOL.

CALENDAR

AND

PROSPECTUS

FOR THE

YEAR COMMENCING OCTOBER 1ST, 1882.



1882 & 1883.

LONDON:

PRINTED BY WILLIAM CLOWES AND SONS, LIMITED,
STAMFORD STREET AND CHARING CROSS.



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Full information on all matters connected with the Medical School, Prizes, &c., will be obtained on application to the Secretary, DR. GILLESPIE, at the Hospital, Albert Embankment, S.E.

A Register of Lodgings suitable for Students has been recently revised, and is kept in the Secretary's Office. Information as to terms, accommodation, &c., can be obtained on application. This Register has been especially prepared, with a view to the convenience of gentlemen newly arriving in town, without definite arrangements having been made for their accommodation in lodgings or otherwise.

Several Medical Practitioners and Private Families residing in the neighbourhood receive Students for residence and supervision.

There is a Restaurant in the Medical School where Students can take their meals at moderate charges.

St. Thomas's Hospital

MEDICAL SCHOOL.

The WINTER SESSION 1882 – 83 will commence on MONDAY, OCTOBER 2nd, and terminate on MARCH 31st.

The SUMMER SESSION will begin on TUESDAY, MAY 1st, and terminate on JULY 31st.

An Introductory Address will be given by Dr. Sharkey in one of the Theatres of the Hospital on Monday, October 2nd, at 3 P.M., after which the various Departments of the Hospital and School will be thrown open in working order for the inspection of Visitors.

Refreshments will be provided in the Library.

The Annual dinner, in which all former and present Students are invited to join, will take place the same evening in the Governors' Hall, at 6 for 6.30.

The Annual Distribution of Prizes will be made during the Summer Session.

ALL accounts agree in attributing the origin of St. Thomas's Hospital to circumstances more or less accidental. In Stow's "Survey of London," we find "that a fire happened in the Borough of Southwark in the year 1207, which destroying the Priory of St. Mary Overie, the Canons erected an Hospital hard by for the celebration of divine service, till their Monastery could be rebuilt; which they soon after accomplishing, Peter de Rupibus, or de la Roche, Bishop of Winchester, for the greater convenience of air and water, removed the said Hospital in the year 1215, and erected it in a place where Richard, Prior of Bermondsey, but two years before had built an Almonry or Almshouse for the reception of indigent children and necessitous Proselytes, and

having dedicated the same to St. Thomas the Apostle, endowed it with land to the amount of three hundred and forty-three pounds per annum."

It is difficult to say whether it is owing to deficiency of historical accuracy in Maitland (from whom the above is quoted), or to excess of orthodoxy, that he names St. Thomas *the Apostle*. Certain it is, however, that Peter de la Roche denominated its foundation "The Spital of St. Thomas the Martyr of Canterbury," in honour of Thomas à Becket whose shrine in Canterbury Cathedral was already drawing what Chaucer aptly terms "shoals" of pilgrims down the "Old Kent Road," and past the very door of the Hospital to the Tabard Inn.

The next fact of importance seems to be the cession of the Hospital by the Prior of Bermondsey to a President, Master and Brethren, in 1482; unless we note an altercation in 1252 between the then Archbishop of Canterbury and the Bishop of Winchester for the patronage of it. This ended in favour of the latter, whose palace hard by survives in name, and partly in structure to the present day, as Winchester House. From an estimate formed about the later of these dates, it appears there were a master and brethren, and three lay-sisters, residing in the Hospital; forty beds were made up for poor, infirm and impotent people, all of whom had victuals and firing allowed to them.

From this time, Golding truly says, nothing of importance occurred either in the government or revenues of St. Thomas's Hospital until the 26th year of Henry VIII., when an estimate was formed of the latter, which were found to amount to the annual sum of £347. 3s. 6d. It is not to be wondered at that we have so little to record during these early times; for the "Hospitium" dependent on the rich Abbey of Bermondsey was, as the name strictly implies, more an Almshouse than a Hospital. No doubt the sick found their way into it with other distressed persons; and no doubt some learned monk, using the shelter and leisure of the cloister for researches in alchemy and medicine, was told off to minister to their

physical necessities. The brotherhood of the Rosy Cross, to which Gower, now lying in the neighbouring church, belonged, was intimately connected with the early quest after Arcana and Elixirs of Life which represented the science of the time.

In the year 1535, Henry VIII. was excommunicated by Pope Paul III., and, declaring himself head of the church, proceeded to dissolve the Catholic houses, whose large revenues went to the Crown. There seem to have been 645 monasteries and abbeys thus treated, twenty-eight of which had abbots with seats in Parliament, ninety colleges and free chapels, and 110 hospitals of various descriptions. It is certainly in favour of the sweeping change that so able and honest a man as Sir Richard Gresham, the Lord Mayor of London, should have put his hand to the following petition to the King:

“Most redowted, puyasant, and noble Prince * * * *—nere and within the cytie of London be iij hospitalls or spytells commonly called Seynt Georges Spytell, Seynt Barthilmews Spytell, and Seynt Thomas Spytell, and the new Abbey of Tower Hill, founded of good devotion by auncient fathers, and endowed with great possessions and rents only for the reliefe, comforte, and helping of the poore and impotent people lying in every street, offending every clene persone passing by the way with theyre fylthy and nasty savors. Wherefore may it please your merciful goodness, enclyned to pytie and compassion, for the reliefe of Xts very images, created to his own similitude, to order by your high authoritie, as supreme head of this Church of England, or otherwise by your sage discretion, that your mayer of your cytie of London, and his brethren the aldermen for the time being, shall and may from henceforth have the order, disposition, rule and governaunce both of all the lands, tenements, and revenues apperteynyng and belongyn to the said Hospitals, governors of them, and of the ministers which be or shall be withyn any of them, and then your grace shall facilie perceyve that where now a small number of Chanons, Priests, and Monkes be founde for theyr own profitt only, and not for the common

utilitie of the realme, a great number of poore, needy, syke and indugent persones shall be refreshed, maynteyned, and comforted; and also healed and cured of their infermities frankly and freely by physicions, surgeons and potycaries, which shall have stipende and salarie only for that purpose; so that all impotent persones not able to labour shall be releved, and all sturdy beggars not willing to labour shall be punished."

St. Thomas's Hospital being claimed by the King as Church property, was surrendered to him by Nicholas Buckland, the then master, on the 15th July, 1538. It was called St. Thomas à Becket's Spittil. Its yearly revenue was estimated at £266. 17s. 6d., and an annual pension of 5s. 8d. was payable by the master, and another of 2s. 1d. by the curate, to the Archdeacon of Surrey. Soon after the seizure, we find that the Citizens of London purchased of the Crown some of its landed estates, producing about £160 yearly. The want of the hospital thus destroyed was felt immediately. Wounded soldiers from the army in France, and the sick poor in general were without provision or help, and Henry proposed granting to the City the Mansion house of St Bartholomew's, the dissolved house of Grey Friars adjoining, and the unoccupied fabric of St. Thomas's Hospital. The latter was intended by Henry to receive the name of the Hospital of the Holy Trinity, and to be allotted exclusively to lame, wounded, and diseased soldiers. The monastery of Grey Friars was to be for the education and maintenance of fatherless children and those of poor parents. The intentions of Henry were overtaken by death, but not before he had conferred upon the Citizens of London the Hospital of St Bartholomew's and also that of Bethlem for lunatics.

It is from the death of Henry that the connection of St. Thomas's Hospital with the city of London appears to begin. To meet the needs of the sick and destitute who had before depended on the charity of the religious houses, a Committee or Board of Inquiry was instituted by the Citizens, with the sanction of King Edward. About 2,100 souls were reported as fit recipients of relief, as fatherless children and invalids

or as "Idle rogues of both sexes who were levying contributions on public sympathy by feigned tales of sorrow." It was proposed to establish receptacles for each class in the unoccupied monastic buildings, and a pecuniary contribution was set on foot to complete the work. They bought the dissolved house of the Franciscans or Grey Friars near St. Bartholomew's Hospital, and also by charter from the King received a grant as follows: "That the said mayor, commonalty, and citizens, and their successors, may have and enjoy all the franchises, immunities, and privileges whatever, which any Archbishop of Canterbury, and which the said Charles late Duke of Suffolk, or any master, brethren, or sisters of the late Hospital of St. Thomas in Southwark aforesaid; or any Abbot of the said monastery of St. Saviour, Saint Mary Bermondsey, next Southwark aforesaid, or any prior and convent of the priory of St. Mary Overie, ever had or enjoyed, or which we hold or enjoy, or our most dear father Henry the VIIIth, late King of England, or had enjoyed, or ought to have, hold, and enjoy the same: and that none of our heirs or successors may intermeddle with this our grant."

The Greyfriars became Christ's Hospital, and the Southwark site the Hospital of the Holy Trinity or St. Thomas's. The Lord Mayor and certain citizens then met on the 6th of October, 1552, and constituted themselves by royal permission governors of the hospitals, and almoners of the money collected. The Hospital of the Holy Trinity they named, in compliment to Edward, the "King's Hospital," and ordained it to receive 260 "wounded soldiers, blind, maimed, sick, and helpless objects."

They also directed that 380 children should be received into Christ's Hospital.

To complete the scheme, the old palace of Bridewell, in Blackfriars, where the Emperor Charles V. had lodged in 1522, when on a visit to Henry VIII., and where subsequently Wolsey had lived, was granted to the City by Edward as a house of correction for dissolute persons and idle apprentices, and for the temporary maintenance of distressed vagrants.

Lastly, the lands lately belonging to the Palace of the Savoy were conferred jointly on the three foundations; and a month only before the end of Edward's short reign, he incorporated by a second charter bearing date the 6th of June, 1553, the Lord Mayor and commonalty of the City of London in succession as perpetual governors of Saint Bartholomew's, Christ's, Bridewell, and the king's Hospital (which last received the name of ST. THOMAS THE APOSTLE), and secured to them the possession of all the estates and revenues appertaining to them by previous deeds of gift. So were the royal hospitals founded.

In 1557 the laws were framed and printed under the name of "The Order of the Hospitals of K. Henry the VIII. and K. Edward the VI., viz. St. Bartholomew's, Christ's, Bridewell, St. Thomas's. By the Maior, Cominaltie, and Citizens of London," &c.

Successive bequests and donations continued to augment the property of the charities, but during the reigns of Elizabeth, James I., Charles I., and the Protectorate, there appear few facts to note. In the abstract of the charter of confirmation granted to the City in 1663 by Charles II. on his restoration, we find the charter of Edward acknowledged and confirmed. The Great Fire of London in 1666 injured St. Thomas's in its revenues only; and a fire in Southwark anno 1676, ceased, "as if by divine interposition," at the Hospital, probably a strong and isolated block of building. Shortly after this, however, it was found necessary to rebuild the fabric, and in 1693 subscriptions were opened for this purpose. A long list of benefactions in this and the succeeding year, amounting in all to £37,769. 3s., is given by Golding, who especially singles out Sir Robert Clayton for eulogium. The statue then erected to him, and still extant, was originally dated 1701, but this was altered on his death to 1714. He was the founder of the old square in which it stood, replacing what Golding terms "a low swampy structure of the monastic order." In 1707, Mr. Guy, founder of the neighbouring hospital, erected three wards at his own

charge. In 1717, the back block of buildings adjoining Guy's Hospital was added. With the exception of the two large blocks forming the Borough frontage, the north wing erected in 1833, and the south wing in 1839, the fabric seems to have remained unchanged until its purchase by the railway. In the centre of the front quadrangle stood the brass statue of King Edward, by Scheemakers, erected first in 1737, in pursuance of the will of Charles Joye, some time treasurer of the Hospital. It now stands in the grounds of the New Hospital.

It is a matter of more difficulty to trace the early history of the medical school in connection with the hospital. For the facts which follow we are indebted to the late R. G. Whitfield, Esq., who, from the long period during which his family had been associated with this foundation, was perhaps more qualified to speak than any other person.

The earliest mention in the hospital books of an apprentice is on December 31st, 1561. It is not until 1702 that a law is met with precluding pupils or surgeons from dissecting the dead body without permission from the treasurer.

In 1703 the grand committee resolved that no surgeon should have more than three "Cubbs," a term altered in 1758 to that of "Dressers." Besides these there were also apprentices to the surgeons of the hospital, and ordinary pupils. The first mention of lectures occurs soon after the appointment of Wm. Cheselden, in 1718. These he at first gave at his own house, but afterwards by permission in the hospital. They were on anatomy and surgery. In 1723 a regular registry was ordered to be kept by the apothecary, of pupils entering to surgical practice. In 1725, Guy's Hospital was opened for the reception of patients. In 1751 the assistant-physician was allowed to take two pupils for his own benefit. In 1768, an additional surgeon, Mr. Joseph Else, was elected to read lectures to the pupils.

The students of Guy's Hospital had by courtesy been allowed to attend the operations, and a similar favour admitted the St. Thomas's men to those at Guy's. But on

the 8th November, 1768, it was formally resolved that the pupils of each hospital have the liberty of attending not only the operations, but surgical practice, and the money to be divided between the six surgeons and two apothecaries. Hence the appellation of the "United Hospital;" an amalgamation never extended beyond the surgical practice.

To Mr. Else is due the foundation of a regular anatomical school. Mr. Cline, who in 1781 was appointed to read lectures conjointly with Mr. Else, was mainly instrumental in bringing it to its greatest celebrity. At Mr. Else's death, Mr. Cline purchased the collection of preparations made by him and Mr. Girle, a former surgeon, which are now in the hospital museum, and became sole lecturer on anatomy. In 1788 he also became surgeon to the hospital. Mr., afterwards Sir Astley, Cooper was apprenticed to Mr. Cline in 1784, and before his election, as one of the surgeons to Guy's Hospital in 1800, was joint lecturer with his teacher on anatomy and surgery. They both added materially to the pathological museum.

In 1812 Mr. Henry Cline was elected surgeon to St. Thomas's Hospital on his father's resignation, and carried on the anatomical lectures conjointly with Astley Cooper. In 1813 a new anatomical theatre and museum were built, the hospital giving £3000 for the purpose, and the two lecturers £1000 each. In 1815 Mr. Benj. Travers, an apprentice of Astley Cooper's at Guy's, was elected surgeon, according to the established rule which gave the vacancy to the senior apprentice of either institution. Mr. Travers joined in the lectures, devoting his attention specially to ophthalmic surgery. In 1820 Mr. Joseph Henry Green was elected surgeon on the death of his cousin Mr. Hy. Cline, having been apprenticed to his uncle Mr. Cline in the year 1809. From 1820 to 1825 he lectured with Astley Cooper. At this period all the branches of medical study,—viz., medicine, chemistry, materia medica, midwifery, botany, and physiology—were lectured on at Guy's Hospital, and no physician of St. Thomas's was allowed to share them.

In 1824 Sir A. Cooper resigned the surgical chair, and Mr. C. Aston Key, his apprentice and nephew by marriage, joined Mr. Green in the office. Mr. Fred Tyrrell, standing in exactly the same relation to Cooper, received permission to lecture on diseases of the eye. In the following year Cooper showed signs of cerebral disturbance, and the family desired that his nephew, Mr. Bransby Cooper, should be his successor. But the claims of Mr. John Flint South were considered superior, and he was appointed. From this cause the "United Hospitals" were severed, and a complete school set up in both. The majority of the students clung to Guy's, where the prestige of the great Sir Astley was still strong; and St. Thomas's school began to sink. The establishment of the Aldersgate Street private school under Tyrrell and Lawrence materially aided in this declension, as did also the secession of Dr. Elliotson to the newly-established University College, and the foundation of a fresh school at King's College, where for a time the surgical lectures were given by Mr. Joseph Henry Green, although a surgeon of St. Thomas's.

Owing to the unprosperous state of affairs in 1842, the Governors came forward to reorganize the school, and the aid of Mr. R. D. Grainger, whose popularity had been established in the Webb Street private school, was obtained. Mr. Joseph H. Green also rejoined the school; and Dr. Marshall Hall, Dr. Hodgkin, Dr. Martin Barry, Dr. Gregory, and Mr. Benjamin Travers contributed to its efficiency. This state of affairs continued until 1858, when the Governors gave back the management, and its attendant risks, into the hands of the lecturers.

For some years it was maintained with difficulty, and at much self-sacrifice on the part of the staff, during what may be termed a transitional period, in the hope, now realized, of its once more developing into an institution worthy of its old traditionary glories.

From its foundation down to the year 1862, the Hospital occupied the original site near London Bridge, but in that year the property was sold for the extension of the railway

accommodation, and the establishment temporarily removed to the Surrey Gardens, where it was carried on till the Summer of 1871. In 1868 the first stone of the new Hospital at Westminster Bridge was laid by the Queen, and the completed building was opened by Her Majesty in 1871. In September the patients were first admitted into the new Hospital, and the Medical School was opened on October the 2nd.

The original Hospital latterly contained 500 beds. The present building contains in all 572 beds. It consists of six blocks appropriated to the reception of patients; with one for the administrative and other offices, and one for the Medical School. The Ward blocks, though connected by corridors, stand apart, so as to afford free exposure in all directions. The Wards, with the exception of four which are placed on the ground floor, occupy the first, second, and third floors. Generally, each Ward affords accommodation for 28 beds, which are placed against the piers between the windows, so as to secure thorough ventilation. In a small Ward annexed to each larger Ward, there are two beds for cases requiring special care or treatment.

Of the whole accommodation of the Hospital, about 180 beds are appropriated to ordinary Medical cases, and 230 to ordinary Surgical cases. There are also special Wards for the reception of diseases peculiar to women; for diseases of the eye; for venereal affections; and for children under six years of age. In one of the blocks, separated from the rest of the establishment, there are Wards for infectious diseases.

The space provided for each bed in the ordinary Wards is upwards of 1,800 cubic feet, and in the block appropriated to infectious diseases, about 2,500 cubic feet.

The Out-patients' Department is extensive and well arranged, and every facility is afforded for the treatment of different forms of Medical and Surgical casualties and diseases.

During the twelve months ending December 31st, 1881, the number of patients admitted into the Hospital amounted

to 4,060. In the same period, 20,037 Out-patients have been treated, and in the Maternity department 2,104 women have been attended at their own homes. Casualties, to the number of 54,817 attendances, were treated during the same period. 836 Children were successfully vaccinated at the Hospital as a Government Station.

The School buildings stand at the southern extremity of the Hospital, from which they are quite isolated. They contain ample accommodation for large classes of students.

The Museum is one of the most important in the metropolis. There is a large Reading Room and Library for the use of the pupils.

In addition to these are the various Lecture Rooms, the Dissecting Rooms, the Laboratories for Practical Physiology and for Practical Chemistry, and the Post-mortem Rooms.

The Committee of the "NIGHTINGALE FUND" have arrangements with the authorities of St. Thomas's for educating Women as Hospital Nurses. On the satisfactory completion of one year's training, they will be required to enter into service as Nurses in the Metropolitan or Provincial Hospitals or Infirmaries. A limited number of gentlewomen can be admitted under special agreements to this course of training, with a view to qualify themselves for superior appointments.

The Regulations as to the admission of Candidates may be obtained by writing to Henry Bonham Carter, Esq., the Secretary of the Nightingale Fund, 91, Gloucester Terrace, Hyde Park, London, W.

Institutions requiring trained Superintendents or Nurses are requested to apply to the Secretary of the Nightingale Fund, or to Mrs. W. W. Wardroper, the Matron of the Hospital, giving as long previous notice as possible of their requirements.

Women wishing to be trained should, whenever it is possible, make personal application to Mrs. Wardroper, to be entered on the list of Candidates, for admission as vacancies occur.

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AND
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	{	Dr. ORD.
	{	Dr. BRISTOWE.
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	{	Dr. ORD.
<i>Do.</i> <i>Obstetric</i>	{	Dr. HARLEY.
	{	Dr. GERVIS.
<i>Surgery</i>	{	Mr. SYDNEY JONES.
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	{	Mr. S. JONES
<i>Clinical Surgery</i>	{	Mr. CROFT.
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	{	Mr. ANDERSON.
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	{	Mr. STEWART.
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<i>Midwifery, and the Diseases of</i>	{	Dr. GERVIS.
<i>Women and Children</i>	{	
<i>Physics and Natural Philosophy</i>	..	Dr. STONE.
<i>Materia Medica, and Therapeutics</i>	..	Dr. STONE.
<i>Forensic Medicine</i>	Mr. CLUTTON and Dr. CORY.
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<i>Botany</i>	Mr. A. W. BENNETT.
<i>Comparative Anatomy</i>	Mr. C. STEWART.
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<i>Practical and Manipulative Surgery</i>	{	Mr. MASON.
	{	Mr. MAC KELLAR.
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	{	Dr. TAYLOR, Mr. BALLANCE,
	{	and ASSISTANTS.
<i>Demonstrations in Morbid Anatomy</i>	Dr. SHARKEY and Dr. HADDEN.
<i>Demonstrations in Physiology</i> ..	{	Dr. T. D. ACLAND.
<i>Demonstrations in Practical Physiology</i>	{	
<i>Diseases of the Eye</i> .. .. .	..	Mr. NETTLESHIP.
<i>Diseases of the Skin</i> .. .. .	..	Dr. PAYNE.
<i>Diseases of the Throat</i> .. .. .	..	Dr. F. SEMON.
<i>Diseases of the Ear</i> .. .. .	..	Mr. CLUTTON.
<i>Diseases of the Teeth</i>	{	Mr. J. W. ELLIOTT.
	{	Mr. W. G. RANGER.

TIMES OF ATTENDANCE OF THE PHYSICIANS AND SURGEONS
IN THE WARDS.

	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.
Dr. BRISTOWE	—	2	—	—	2	—
Dr. STONE	2	—	—	2	—	—
Dr. ORD	2	—	—	2	—	—
Dr. HARLEY	—	2	—	—	2	—
Dr. GERVIS	2	—	—	2	—	—
Mr. SYDNEY JONES	—	2	—	—	2	—
Mr. CROFT	2	—	—	2	—	—
SIR WILLIAM MAC CORMAC ..	2	—	—	2	—	—
Mr. MASON	—	2	—	—	2	—
Mr. NETTLESHIP	9	—	—	9	—	—

TIMES OF ATTENDANCE OF THE ASSISTANT-PHYSICIANS AND
ASSISTANT-SURGEONS ON THE OUT-PATIENTS.

	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.
Dr. PAYNE	—	12.30	—	—	12.30	—
Dr. SHARKEY	12.30	—	—	12.30	—	—
Dr. GULLIVER	—	—	12.30	—	—	12.30
Dr. CORY (Women and Children) ..	—	—	1.30	—	—	12.30
Mr. MAC KELLAR	12.30	—	—	12.30	—	—
Mr. CLUTTON	—	12.30	—	—	12.30	—
Mr. ANDERSON	—	—	12.30	—	—	12.30

TIMES OF ATTENDANCE ON THE OUT-PATIENT SPECIAL
DEPARTMENTS. (See p. 21.)

	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.
Mr. NETTLESHIP (Diseases of Eye)	1.30	4	1.30	1.30	1.30	—
Dr. PAYNE (Diseases of Skin) ...	—	—	—	12.30	—	—
Dr. SEMON (Diseases of Throat) ..	—	12.30	—	—	12.30	—
Mr. CLUTTON (Diseases of Ear) ..	12.30	—	—	—	—	—
Mr. ELLIOTT } (Diseases of Teeth)	—	10	—	—	10	—
Mr. RANGER }						
Dr. CORY (Vaccination)	—	—	11.30	—	—	—

DAYS AND HOURS OF ATTENDANCE ON LECTURES AND DEMONSTRATIONS.

WINTER SESSION.	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	Years of Attendance.
Physics	—	—	—	—	—	12	1st Year.
Chemistry	—	10½	—	10½	10½	—	do.
Descriptive and Surgical Anatomy ..	9½	9½	9½	9½	9½	—	1st & 2nd.
Anatomical Demonstrations*	10—4	10—4	10—4	10—4	10—4	10—2	do.
Physiology	—	4	4	—	4	—	do.
Physiological Demonstrations	—	—	11.30	—	11.30	—	do.
Practical and Manipulative Surgery	—	—	—	—	—	9	2nd.
Medicine ... { Oct. 1st to Dec. 31st	4	—	—	4	4	—	} 3rd.
{ Jan. 1st to Mar. 31st	9	—	—	9	9	—	
Surgery ... { Oct. 1st to Dec. 31st	9	—	—	9	9	—	} do.
{ Jan. 1st to Mar. 31st	4	—	—	4	4	—	
Pathological Anatomy (Practical) ..	—	—	—	—	—	11½-1½	3rd or 4th.
Clinical Surgery (Special Course) ..	—	9	—	—	—	—	do.
Obstetric Demonstrations	—	—	9	—	—	—	do.

Demonstrations of Morbid Anatomy 2 p.m. daily.

SUMMER SESSION.	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	Years.
Materia Medica	9	—	9	—	9	—	1st Year.
Botany	—	10	10	—	—	10	do.
Practical Chemistry	10—12	—	—	10—12	10—12	—	do.
Practical Physiology	—	12.30	12.30	—	12.30	—	do.
Midwifery	4	4	—	4	4	—	2nd.
Comparative Anatomy	12	—	—	12	—	—	do.
Forensic Medicine	—	9	—	9	—	9	3rd.
Pathological Anatomy	—	—	9	—	9	—	do.
Do. Demonstration	4	—	—	—	—	—	do.
Ophthalmic Surgery	—	9	—	—	—	—	3rd or 4th.
Practical and Manipulative Surgery	—	4	—	—	4	—	do.
Mental Diseases	—	—	—	—	12	—	do.
State Medicine	—	—	4	—	—	—	do.
Clinical Surgery (Special Course) ..	—	—	—	9	—	—	do.

Demonstrations of Morbid Anatomy 2 p.m. daily.

The times of delivery of the Clinical Lectures are arranged, in accordance with other work,
in the course of the Session.

* The Dissecting Room is open to the Students from 9 a.m. till 5 p.m.

SURGICAL OPERATIONS are performed on Wednesdays and Saturdays at 1.30 p.m., except in cases of emergency.

In-Patients are admitted daily at Half-past 11 o'clock.

Out-Patients with Diseases of the Skin are seen by Dr. PAYNE, on Thursdays at Half-past 12 o'clock.

Diseases of Women and Children occurring amongst *Out-Patients* are treated, on Wednesdays at 1.30, and Saturdays at 12.30, by Dr. CORY.

Ophthalmic cases are seen as *Out-patients* by Mr. NETTLESHIP, at 1.30 daily, except Saturdays; and the Operations are performed on Tuesdays at 4 and Fridays at 2 o'clock.

Out-Patients with Diseases of the Ear are seen by Mr. CLUTTON, on Mondays at Half-past 12 o'clock; and those with Diseases of the Throat by Dr. SEMON on Tuesdays and Fridays at the same hour.

Instruction in *Dental* Surgery is given by Mr. ELLIOTT and Mr. RANGER, on Tuesdays and Fridays, at 10 o'clock.

Practical Instruction in the administration of anæsthetics will be given by Mr. OSBORN.

Post-Mortem Examinations by Dr. SHARKEY and Dr. HADDEN, and Pathological Demonstrations, daily, at 2 o'clock p.m.

The Medical and Surgical *Casual Patients* are seen by the Resident Assistant-Physician, the Resident Assistant-Surgeon, the House-Surgeons, Assistant House-Surgeons and Dressers, at 12 o'clock daily.

In addition to the Clinical instruction given in the Wards and the *Out-Patients' Rooms* by the Medical and Surgical Officers, and the Special Course of Clinical Surgery, Lectures on Clinical Medicine and Surgery are delivered weekly during both the Winter and Summer Sessions by the Physicians and Surgeons to the Hospital; a Clinical lecture and Ophthalmoscopic demonstration are given, and a class for instruction in Diseases of the Eye is held by the Ophthalmic Surgeon, each once a week.

Practical instruction in Vaccination is given by Dr. CORY once a week.

St. Thomas's Hospital is now recognised as a Local Vaccination Station, and Dr. CORY is authorised to give certificates of instruction in Vaccination according to the requirements of the Local Government Board. Fee One Guinea.



SUGGESTIONS TO STUDENTS.

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All gentlemen who propose to obtain the Licence of the Royal College of Physicians of London, the Diploma of the Royal College of Surgeons of England, or the Licence of the Society of Apothecaries, must, in order to be able to register their attendance upon Hospital practice or lectures, possess the certificate in Arts granted by one of the bodies whose certificates are recognised by the General Medical Council. The Regulations of the Medical Council as to the registration of Medical Students contain particulars of the Preliminary Examinations, and can be had from Spottiswoode & Co., 30, Parliament Street.

Students wishing to obtain a Medical Degree of the University of London *must* pass the *Matriculation* Examination; no other Preliminary will suffice. For the Matriculation, the Preliminary Scientific, and the Intermediate M.B. Examinations, Special Classes are held here (see p. 26).

Students not proposing to seek a degree in the University of London, will always reap much advantage by acquiring, in the Preliminary Scientific Class, the amount of scientific knowledge and training demanded by the University; generally, with respect to the formation of a sound foundation of Medical Study; specially, in that such knowledge is necessary in the competition for the Entrance Science Scholarship.

Students proposing to enter should put themselves, at an early period, in communication with the Secretary, who will be always ready to advise them. It is necessary, when writing to him, to state if any, and, if any, which Preliminary Examination has been passed, and if the name of the Student has been registered at the Medical Council Office.

Students when joining must produce a Certificate of Preliminary Examination or of Registration. It is best to join at the beginning of a Session, Winter or Summer, but it is in the power of a Student to enter at any time which he may find suitable.

Students are not obliged to remain at the Hospital more than three years, provided they have obtained the certificates of attendance upon lectures required by the respective licensing bodies. They must, however, in the event of leaving the Hospital, be engaged during the fourth year in the acquisition of professional knowledge elsewhere, unless they have completed a recognised period of study before coming to the Hospital.

It is right, however, that Students should be aware that the loss of the fourth year of Hospital Study is strongly to be deprecated, inasmuch as at that period the necessity of attending Lectures having ceased, the



whole time can be spent in the study of disease in the wards of the Hospital.

Students, when qualified, are strongly advised to use every effort to obtain the Senior appointments open to them, and especially those of Assistant and full House Physician, House Surgeon, &c. These appointments are accessible to Students of the Hospital without payment, and offer opportunities for obtaining practical professional knowledge, the value of which it is impossible to estimate too highly.



Students are recommended to attend the Lectures, &c., in the following order; and, in accordance with the Regulations of the Qualifying Bodies, are required to show by their answers in the Sessional Examinations, that they have paid proper attention to the Lectures in each Course.

### FIRST YEAR.

*Winter Session.*—Anatomy, Dissections, Physiology, Chemistry.

*Summer Session.*—Materia Medica, Botany, Practical Physiology, Practical Chemistry.

### SECOND YEAR.

*Winter Session.*—Anatomy, Physiology, Dissections, Practical Surgery, Clinical Medicine and Surgery.

*Summer Session.*—Midwifery, Comparative Anatomy, Clinical Medicine and Surgery.

*N.B.*—Students should defer further attendance on Lectures until they shall have passed the first Examination of the College of Surgeons.

### THIRD YEAR.

*Winter Session.*—Medicine, Surgery, Clinical Medicine and Surgery.

*Summer Session.*—Forensic Medicine, Pathological Anatomy, Clinical Medicine and Surgery.

In addition to the above, Students are advised, during their first Winter Session, to attend the Lectures on Physics and Natural Philosophy; in their third or fourth Summer Session, to attend the extra course of Practical and Manipulative Surgery; the course of Ophthalmic Surgery, and instruction in the examination of the Eye; and the Lectures on Mental Disease, and on State Medicine; and in the third or fourth Winter the Practical Course of Pathological Anatomy, and the Obstetric Demonstrations. All these courses are freely open to Students of the Hospital.

They are also strongly recommended to devote, during the whole period of their attendance at the Hospital, as much time as they can spare from other engagements, to the study of Practical Medicine and Surgery in the wards and in the out-patients' rooms.

# FEES FOR ATTENDANCE ON THE LECTURES AND ON THE PRACTICE OF THE HOSPITAL.

## ~~~~~ PERPETUAL TICKETS.

*Admitting to Hospital Practice and Lectures for an unlimited period.*

The Perpetual Fee to Hospital Practice and Lectures may be paid in several ways :

1st. One Hundred and Twenty-five Pounds paid on entrance ;  
2nd. One Hundred and Thirty-five pounds in two payments, £75 on entrance, and £60 at the beginning of the next year ;

3rd. Payment by three instalments, viz., of £65 at the beginning of the first year, £50 at the beginning of the second year, and £30 at the beginning of the third year.

Gentlemen entering at St. Thomas's in the second\* year of their Studentship pay £65 for that year ; £25 for the third year ; or upon paying £85 on entrance, they will become Perpetual Students. Students entering in their third year pay £40 ; for the next year £20, or one payment of £55 on entrance will entitle them to be Perpetual Students.

The Fee for attendance on the *general* subjects required of Students in Dental Surgery, is for the two years, £55, or by instalments, £50 for the first year, and £10 for the second year. If certificates for *Dental* practice are also required, the special fee for that subject (page 25) has to be paid.

Regularly qualified Medical Practitioners are admitted to the Hospital practice, and to the Lectures and Library, on payment of a fee of £12. 10s. for unlimited attendance ; but are not entitled to receive certificates for such attendance without payment for the special certificates required (see p. 25).

All privileges in respect of Hospital attendance are granted subject to the approval of the Governors, and Students must conform to the regulations of the Hospital and Medical School, on which understanding alone cards of attendance are granted.

## EXTRA CHARGES.

Students are now supplied with chemicals and materials to work with in the courses of Chemistry and Physiology

\* Students who have commenced the study of the Profession otherwise than by attendance at a Medical School, will be considered to be first year's Students on joining the Medical School, as the time previously spent does not count until three years' Lectures have been attended, but a deduction from the Perpetual Fee will be allowed in such cases.

without extra charge, but there are certain instruments and materials required during the course of study, as follows, viz.:

Those attending the Class of Practical Physiology in the summer should provide themselves with Microscopes.

Students Dissecting pay for the parts they dissect at fixed rates, which are notified in the Library.

The Clinical Clerks must provide themselves with a Stethoscope and Registering Clinical Thermometer. The Dressers are required to have a Registering Clinical Thermometer, a Pocket Case of Instruments, and a Case of Silver Catheters.

The fee for Practical Pharmacy is not included in the Perpetual fee, as many Students have learned it before joining a Medical School; but instruction in Pharmacy and Pharmaceutical Manipulation, to meet the requirements of the Royal Colleges of Physicians and Surgeons, and of the Society of Apothecaries, is given in the Dispensary of the Hospital by the Apothecary, Mr. S. PLOWMAN. The fee for this course of instruction is 5 Guineas for three months. Application to be made to the Secretary, Dr. GILLESPIE.

The different Courses of Lectures, or the Hospital Practice, may also be attended separately on the following terms, which entitle to Certificates for such Attendances.

*For the Medical and Surgical Practice, including Clinical Lectures and the Special Departments.*

|                      |     |                       |     |
|----------------------|-----|-----------------------|-----|
| Three months .. .. . | £15 | Twelve months .. .. . | £40 |
| Six ditto .. .. .    | £26 | Perpetual .. .. .     | £55 |
| Nine ditto .. .. .   | £35 |                       |     |

Dental Practice, 1 year 2 Gs., Perpetual 3 Gs.

Midwifery Practice, 5 Gs.

Ophthalmic Practice, 2 Gs.

*For Lectures and Demonstrations.*

*1 Course. Perpetual.*

Medicine, Surgery, Physiology, Anatomy, Chemistry each 7 Gs. .. 10 Gs.

Midwifery .. .. . 5 " .. 6 "

Materia Medica, Botany, Physics, Forensic Medicine, } 4 " .. 5 "

General Pathology, and Comparative Anat. each }

Mental Diseases, Ophthalmic Surgery, State Medicine each 2 " .. 3 "

\* Practical Chemistry, Practical Surgery, Practical } 6 " —

Physiology, Pathological Anatomy, including the }

Practical Course .. .. . each }

Dissections, three months 4 Gs., six months 6 Gs., Perpetual 10 Gs.

Operative Surgery—A voluntary class will be formed by MESSRS. MACKELLAR and CLUTTON during the Summer, and at other convenient times, for Gentlemen who wish to prepare for the Fellowship or other Examinations. This course will not include Operations on the Eye-ball. Fee, £5 5s.

Operative Surgery of the Eye.—A voluntary class will be formed by Mr. NETTLESHIP during the Summer, in connection with the preceding course. Fee, £1 1s. This course may also be taken separately, either in Summer or Winter. Fee, £2 2s.

Special Courses of Obstetric Demonstrations are given by Dr. CORY throughout the year. Fee, £3 3s.

\* These amounts do not include the extra charges in the Practical Courses for Materials, Instruments, &c.



# UNIVERSITY OF LONDON

## MATRICULATION, PRELIMINARY, SCIENTIFIC, AND INTERMEDIATE M.B. CLASSES.

### MATRICULATION EXAMINATION.

Classes in the following subjects will commence in October for the January Examination, and in March for the June, and be continued as follows :

|                                                  |                         |                                              |
|--------------------------------------------------|-------------------------|----------------------------------------------|
| Chemistry .. .. .                                | Dr. BERNAYS .. ..       | Mon. and Fri. at 12.                         |
| English Language, History<br>and Geography .. .. | Dr. MAYBURY .. ..       | { Mondays, Wednesdays,<br>Thursdays, 2 to 3. |
| French and German .. ..                          | A. VON WATZDORF .. ..   | Mon. and Thurs., 3.                          |
| Greek and Latin .. ..                            | Dr. MAYBURY .. ..       | { Mondays, Wednesdays,<br>Thursdays, 1 to 2. |
| Mathematics and Natural<br>Philosophy .. .. .    | A. LE SUEUR, B.A. .. .. | { Tuesdays and Fridays,<br>2 o'clock.        |

Fee for the whole Course, *Ten Guineas*; arrangements can be made to attend one or more Subjects only. Subsequent Courses, half Fee.

### PRELIMINARY SCIENTIFIC EXAMINATION.

Special Classes in the subjects required for the Preliminary Scientific Examination at the University of London, will be held from October to July, and will include all the subjects required as follows :

|                                            |                                                    |                                                       |
|--------------------------------------------|----------------------------------------------------|-------------------------------------------------------|
| Botany .. .. .                             | { A. W. BENNETT, M.A., B.Sc.<br>Lond., &c. .. .. } | Wednesdays, 11 to 12.                                 |
| Chemistry (Inorganic)                      | A. J. BERNAYS, Ph.D., F.C.S.                       | Tuesdays, 11 30.                                      |
| Do. (Practical)                            | Do.                                                | Fridays, 11.30.                                       |
| Mechanical and Natural<br>Philosophy .. .. | W. H. STONE, M.B. Oxon.                            | { Sat. 12, Oct. to March.<br>Fridays 3, May to July.  |
| Zoology .. .. .                            | C. STEWART, M.R.C.S., &c.                          | { Thurs. 11.30, Oct. to Mar.<br>Sat. 11, May to July. |

The Fee charged to Students of the Hospital for instruction in the above is\* .. .. . *Six Guineas*.

To others, inclusive of Practical Chemistry and Chemicals .. .. . *Twelve Guineas*.

Fee for any single subject .. .. . *Three Guineas*.

Subsequent Courses, half Fee.

\* Instruction in Practical Chemistry is necessary for this Examination. This, so far as Students of the Hospital are concerned, is held to be given in the course of Practical Chemistry attended by all Students in their first Summer, the requirements of the University being specially regarded in this Course, but Students requiring a Second Course of Practical Chemistry, are charged .. .. . *A Guinea and a-half for Chemicals*.

### INTERMEDIATE EXAMINATION IN MEDICINE.

Special Classes in the subjects required for this Examination are held by the different Lecturers on those Subjects, from January to July.

|                                       |                                                         |                                        |
|---------------------------------------|---------------------------------------------------------|----------------------------------------|
| Anatomy .. ..                         | R. W. REID, Esq., C.M. ..                               | Thursdays, 11.                         |
| Materia Medica and<br>Therapeutics .. | { W. H. STONE, M.B. Oxon ..<br>S. PLOWMAN, Esq. .. .. } | { Wednesdays, 2.30.<br>Tuesdays, 2.30. |



|                   |                      |       |                    |
|-------------------|----------------------|-------|--------------------|
| Organic Chemistry | A. J. BERNAYS, Ph.D. | .. .. | Wednesdays, 11.30. |
| Do. Analysis      | Do.                  | .. .. | Saturdays, 10.     |
| Physiology        | .. .. Mr. STEWART    | .. .. | Fridays, 11.       |

Fee to Students of the Hospital inclusive of

|                                 |       |    |                        |
|---------------------------------|-------|----|------------------------|
| Organic Analysis and Chemicals* | .. .. | .. | <i>Nine Guineas.</i>   |
| To others ditto                 | .. .. | .. | <i>Twelve Guineas.</i> |
| Fee for any Single Subject      | .. .. | .. | <i>Three Guineas.</i>  |

Subsequent Courses, half Fee (except Chemicals, for which full fee is charged).

\* Instruction and Practice in Organic Analysis is essential for this Examination.

*N.B.—Private Classes are held for the Final M.B. Examination.*

## SCHOLARSHIPS, PRIZES, APPOINTMENTS, AND HONORARY DISTINCTIONS.

### OPEN SCHOLARSHIPS IN NATURAL SCIENCE.

As an inducement to the study of Natural Science before the commencement of the strictly Medical Course, two Scholarships, of the value of £100 and £60 respectively, are awarded annually, after an examination in Physics, Chemistry, and either Botany or Zoology, at the option of Candidates. The Examinations for these Scholarships will be held on October 4th, 5th, and 6th, 1882, the subjects being the same as those for honours in the Preliminary Scientific Examination of the London University, viz.: Botany, Zoology, Inorganic Chemistry (including Practical Chemistry), and Physics or Natural Philosophy. These Scholarships are open to all Students who have passed a recognised Preliminary Examination in Arts, and have not yet attended Lectures on Anatomy and Physiology of the first year, without any condition as to their becoming Students of the Hospital, except in the case of successful Candidates, who must enter at once as Perpetual Pupils. Chemistry and Physics shall be compulsory subjects for this Examination, and Candidates must take up one of the other subjects at their option. The Examination will be conducted by means of written papers and practical work. The names of Competitors with Certificate of Preliminary Examination must be sent to the Secretary not later than September 30th.

#### THE WILLIAM TITE SCHOLARSHIP.

This Scholarship, founded by the late Sir W. TITE, C.B., M.P., F.R.S., and endowed with £1,000 Consols, producing £30 per Annum, is awarded each year to the Student placed highest in the 1st Class List in the examinations at the end of the first Winter Session. Preference, in case of equality between Students, is to be given to the son of a medical man, and more particularly of one who has been educated at St. Thomas's Hospital or is in Practice in Bath.

#### THE MUSGROVE SCHOLARSHIP.

This Scholarship, founded by Sir JOHN MUSGROVE, Bart., the late President of the Hospital, and endowed with £1,400 Consols, producing 40 Guineas per Annum, is awarded biennially to the Student who shall take the highest place in the 1st Class List in the examinations at the end of the Second Winter Session. It is tenable for two years, provided the holder obtains a place in the 1st Class in the Examinations at the end of the third winter.

#### A COLLEGE SCHOLARSHIP.

A Scholarship, of the value of 40 Guineas, also tenable for two years, will be given every second year, alternately with the Musgrove Scholarship, and on similar conditions, as to second tenure.

*Gentlemen obtaining these Scholarships are not precluded from receiving any of the Prizes awarded at the subsequent periodical examinations.*

## PRIZES.

The following Scholarships, Prizes, and Medals, will be offered for Competition during the year 1882-1883:—

TWO OPEN SCHOLARSHIPS IN NATURAL SCIENCE of the value of £100 and £60 respectively, at Entrance.

### AT THE END OF FIRST YEAR.

#### *Winter.*

|      |    |                              |    |    |    |      |
|------|----|------------------------------|----|----|----|------|
| 1st. | .. | The William Tite Scholarship | .. | .. | .. | £30. |
| 2nd. | .. | College Prize                | .. | .. | .. | £20. |
| 3rd. | .. | Ditto                        | .. | .. | .. | £10. |

#### *Summer.*

|      |    |               |    |    |    |      |
|------|----|---------------|----|----|----|------|
| 1st. | .. | College Prize | .. | .. | .. | £15. |
| 2nd. | .. | Ditto         | .. | .. | .. | £10. |

### SECOND YEAR.

#### *Winter.*

|      |    |                          |    |    |    |      |
|------|----|--------------------------|----|----|----|------|
| 1st. | .. | The Musgrove Scholarship | .. | .. | .. | £42. |
| 2nd. | .. | College Prize            | .. | .. | .. | £20. |
| 3rd. | .. | Ditto                    | .. | .. | .. | £10. |

#### *Summer.*

|      |    |               |    |    |    |      |
|------|----|---------------|----|----|----|------|
| 1st. | .. | College Prize | .. | .. | .. | £15. |
| 2nd. | .. | Ditto         | .. | .. | .. | £10. |

### THIRD YEAR.

#### *Winter.*

Second Tenure of College Scholarship (if holder obtains 1st Class) in this examination .. .. £42.

|      |    |               |    |    |    |      |
|------|----|---------------|----|----|----|------|
| 1st. | .. | College Prize | .. | .. | .. | £20. |
| 2nd. | .. | Ditto         | .. | .. | .. | £15. |
| 3rd. | .. | Ditto         | .. | .. | .. | £10. |

#### *Summer.*

|      |    |               |    |    |    |      |
|------|----|---------------|----|----|----|------|
| 1st. | .. | College Prize | .. | .. | .. | £15. |
| 2nd. | .. | Ditto         | .. | .. | .. | £10. |

Students of each year are classed according to their respective merits in the examinations, and those in the *first* class in each year receive Certificates of Honour, and a preference in the selection for Hospital Appointments.

In addition there are awarded—

THE CHESELDEN MEDAL, *Annually.*

THE MEAD MEDAL, *do.*

THE SOLLY MEDAL AND PRIZE, *Biennially.*

THE GRAINGER TESTIMONIAL PRIZE, *do.*

THE TREASURER'S GOLD MEDAL, *Annually.*

The CHESELDEN MEDAL, founded by the late GEORGE VAUGHAN, Esq., is annually awarded to the Fourth Year's Student who most distinguishes himself in respect of a Special Practical Examination in Surgery and Surgical Anatomy.

The MEAD MEDAL, founded by Mr. and Mrs. NEWMAN SMITH, is awarded annually, to a Fourth Year's Student, in respect of a Special Practical Examination in Medicine, Pathology and Hygiene.

Competitors for either of these Medals must have been Students of St. Thomas's for at least two out of the four Winter Sessions.

The **SOLLY MEDAL**, together with a Prize in Money, will be awarded biennially. Those Students are eligible to compete who shall be of from three to six years' standing. The award is made for the best series of Reports of Surgical cases coming under the Students' personal observation in the Wards, not, however, to exceed ten in number. Preference is given, merit in other respects being equal, to Reports illustrated by the author's drawings, and short Clinical Remarks must accompany each Report. The next award will be made at the end of 1883-84, papers to be sent in before April 1st, 1884.

The **GRAINGER TESTIMONIAL PRIZE**, of the value of Twenty Pounds, is awarded biennially to Students who shall be of from three to six years' standing, for the best Physiological Essay, to be illustrated by preparations and dissections. Competitors for this Prize must be Medical Students of St. Thomas's Hospital, and on the day of sending in their Essays, Dissections, and Preparations, shall have completed the Second, and not more than the sixth year of their medical studies. The next award will be made in 1882, papers to be sent in before October 1st, 1882.

The **TREASURER'S GOLD MEDAL** for General Proficiency and Good Conduct, is awarded at the end of the 4th Winter Session to the Student who has passed through his pupilage in St. Thomas's Hospital in the most meritorious manner.

TWO **RESIDENT** and one **NON-RESIDENT HOUSE PHYSICIANS**, and an **ASSISTANT HOUSE PHYSICIAN**, TWO **HOUSE SURGEONS**, an **ASSISTANT HOUSE SURGEON**, and a **RESIDENT ACCOUCHEUR**, are selected every three months from Gentlemen who have obtained their professional diplomas; they hold office for three or six months. The Assistant House Physician and House Surgeon are non-resident, but the other Officers, together with the Dressers and Obstetric Clerks, are provided with Rooms and Commons during their period of attendance in the Hospital, free of expense.

AN **OPHTHALMIC CLINICAL ASSISTANT**, chosen from Qualified Students who have worked satisfactorily in the Ophthalmic Department, is appointed for six months with a Salary at the rate of £50 per annum, with board but not residence; the appointment is renewable for a limited period.

**CLINICAL CLERKS**, and **DRESSERS**, to In-Patients are selected to the number of at least 100 each year. They are chosen from amongst the most eligible pupils. **CLINICAL CLERKS**, and **DRESSERS**, for the Out-Patients are also appointed to the number of at least 80 to 100 each year.

ALL STUDENTS have the opportunity afforded them of being engaged in the performance of practical duties in connection with the Medical, Surgical, Obstetrical, Ophthalmic, and Pathological Departments of the Hospital.

TWO **HOSPITAL REGISTRARS**, at an annual Salary of £100 each, are appointed in each year. Preference will be given to Gentlemen who have been distinguished for merit, and have completed their studies in the School. The payment of the Registrars is subject to the presentation of a Report upon the Practice of the Hospital, and to such Report being regarded as satisfactory by the Medical Officers to whom it shall have been referred.

TWO OR MORE STUDENTS are selected from those who have completed their Second Winter Session, to act as Assistants in the Physiological Laboratory.

TWO OR MORE STUDENTS are selected from those who have completed their Second Winter Session, to act as Assistants in the Dissecting Room, They receive Certificates of Honour according to merit.

PROSECTORS are appointed in the early part of the Winter Session, and Prizes are awarded to the best Dissectors at the termination of the Session.



STUDENTS are likewise appointed to act as Assistants to the Demonstrators of Pathological Anatomy in the Post-mortem Room.

OBSTETRIC CLERKS, who reside and have Commons in the Hospital, are appointed in rotation. Each holds office for a fortnight, and Certificates of Honour are awarded to those Gentlemen who have satisfactorily attended Sixty Maternity cases.

Students have access, with the permission of the Officers under whose superintendence they are placed, to the Museums of Human and Comparative Anatomy and Pathology—of Materia Medica—of Botany—and of Chemistry and Mineralogy—and to the Laboratories of Practical Physiology and Practical Chemistry; also to the Library, which contains a large collection of works of reference and modern text-books.

### REGULATIONS FOR THE EXAMINATION AND CLASSIFICATION OF THE STUDENTS.

1. In accordance with the Regulations of the Qualifying Bodies, Students will be required to attend the Class Examinations in the subjects for which they have to be certified, and show by their answers to the questions that they have paid proper attention to the Lectures, otherwise their Schedules cannot be signed.

2. There shall be held at least two Examinations in each Winter and one in each Summer Session in each subject on which attendance is required during that Session, and the marks obtained in these Examinations shall be the basis for the Classification of Students and the Award of Prizes for each Session respectively. Provided that any extra Examination in the course of the Session, in any subject, be not allowed to interfere with the ordinary Lectures in other subjects.

3. The number of marks allotted to each subject in the following Schedule is not to be exceeded in case the number of Examinations held during the Session be more than two, but must be distributed amongst the several Examinations.

| 1st YEAR'S SUBJECTS. |                               | 2nd YEAR'S SUBJECTS— <i>continued</i> . |                               |
|----------------------|-------------------------------|-----------------------------------------|-------------------------------|
| WINTER .             | Anatomy . . . . . 600         | SUMMER .                                | Midwifery . . . . . 500       |
|                      | Practical Anatomy . . . 200   |                                         | Comparative Anatomy . 100     |
|                      | Physiology . . . . . 600      |                                         | Total . . . . . 600           |
|                      | Chemistry . . . . . 600       |                                         |                               |
|                      | Total . . . . . 2000          |                                         |                               |
| SUMMER .             | *Practical Chemistry . . 300  | 3rd YEAR'S SUBJECTS.                    |                               |
|                      | Materia Medica . . . . 300    | WINTER .                                | Medicine . . . . . 650        |
|                      | Botany . . . . . 150          |                                         | Surgery . . . . . 650         |
|                      | Practical Physiology . . 300  |                                         | Total . . . . . 1300          |
|                      | Total . . . . . 1050          |                                         |                               |
| 2nd YEAR'S SUBJECTS. |                               |                                         |                               |
| WINTER .             | Anatomy . . . . . 600         |                                         | 3rd SUMMER.                   |
|                      | Practical Anatomy . . . 200   |                                         | Forensic Medicine . . . . 250 |
|                      | Physiology . . . . . 600      |                                         | Pathological Anatomy . . 350  |
|                      | Practical Surgery . . . . 200 |                                         | Total . . . . . 600           |
|                      | Total . . . . . 1600          |                                         |                               |

\* Students who have been already examined in this subject in the Preliminary Scientific Course need not go in again, and will be allowed to count the marks then obtained as part of the 1st Summer Examination.

4. All Students who have obtained at least one-third of the total number of marks in each subject, and not less than two-thirds of the total number allotted to all the subjects collectively, shall be placed in the 1st Class.

Those who have obtained one-third of the total number of marks allotted to all the subjects collectively shall be placed in the 2nd Class.

The names of those who do not obtain either a 1st or 2nd Class position will not be published, but a General List showing the exact position of each Student at every Examination shall be kept by the Secretary,



from whom any Student can learn his own position, but no Lecturer shall make known to Students the number of marks obtained by any Student in any subject.

5. The Prizes shall be awarded to the Students holding the 1st, 2nd, and 3rd positions in the 1st Class of each Winter Session, and to those holding the 1st and 2nd positions of the 1st Class in each Summer Session.

6. The number of marks allotted to the Examinations for the MEAD and CHESELDEN Medals shall be 600 each.

7. In awarding the TREASURER'S Medal the number of marks obtained at the Sessional Examinations and in the MEAD and CHESELDEN Examinations shall be counted, provided that, as regards the Examination for the Medals, two-thirds of the maximum marks be obtained, but those obtained in the Entrance Scholarship Competition shall not be included.

8. The Authorities reserve the right of withholding any Prize, if no competitor of sufficient merit presents himself.

## Distribution of Prizes for the Past Sessions.

### SUMMER SESSION, 1881.

#### FIRST YEAR'S STUDENTS.

|                                            |                                                     |
|--------------------------------------------|-----------------------------------------------------|
| G. A. CARPENTER, <i>Streatham</i> ... ..   | { College Prize, £15,<br>and Certificate of Honour. |
| R. LAWSON, <i>Wintham, N. Brit.</i> ... .. | { College Prize, £10,<br>and Certificate of Honour. |
| G. S. SIMS, <i>Derby</i> ... ..            | { College Prize, £5,<br>and Certificate of Honour.  |

#### SECOND YEAR'S STUDENTS.

|                                             |                                                     |
|---------------------------------------------|-----------------------------------------------------|
| H. B. ROBINSON, <i>Lower Norwood</i> ... .. | { College Prize, £15,<br>and Certificate of Honour. |
|---------------------------------------------|-----------------------------------------------------|

### WINTER SESSION, 1881-82.

#### ENTRANCE SCIENCE SCHOLARSHIPS.

|                                                              |                                                   |
|--------------------------------------------------------------|---------------------------------------------------|
| H. SYDNEY JONES, <i>George Street, Hanover Square</i> ... .. | { Scholarship, £80,<br>and Certificate of Honour. |
| J. S. HUTTON, <i>Sevenoaks</i> ... ..                        | { Scholarship, £80,<br>and Certificate of Honour. |

#### FIRST YEAR'S STUDENTS.

|                                                              |                                                                   |
|--------------------------------------------------------------|-------------------------------------------------------------------|
| H. SYDNEY JONES, <i>George Street, Hanover Square</i> ... .. | { The Wm. Tite Scholarship,<br>£30,<br>and Certificate of Honour. |
| J. S. HUTTON, <i>Sevenoaks</i> ... ..                        | { College Prize, £20,<br>and Certificate of Honour.               |
| H. C. KIDD, <i>Upper Norwood</i> ... ..                      | { College Prize, £10,<br>and Certificate of Honour.               |
| E. S. GOODDY, <i>Hampstead</i> ... ..                        | Certificate of Honour.                                            |
| K. TOTSUKA, <i>Japan</i> ... ..                              | Certificate of Honour.                                            |
| S. WARREN, <i>Dover</i> ... ..                               | Certificate of Honour.                                            |
| A. E. OLDING, <i>Brighton</i> ... ..                         | Certificate of Honour.                                            |
| F. D. CROWDY, <i>The Temple</i> ... ..                       | Certificate of Honour.                                            |
| G. CRANSTOUN, <i>Ludlow</i> ... ..                           | Certificate of Honour.                                            |

## SECOND YEAR'S STUDENTS.

|                                             |                                                                     |
|---------------------------------------------|---------------------------------------------------------------------|
| H. H. LANKESTER, <i>Leicester</i> ... ..    | { The College Scholarship,<br>40 Gs.,<br>and Certificate of Honour. |
| R. LAWSON, <i>Winthank, N. Brit.</i> ... .. | { College Prize, £20,<br>and Certificate of Honour.                 |
| G. A. CARPENTER, <i>Streatham</i> ... ..    | { College Prize, £10,<br>and Certificate of Honour.                 |
| R. T. CANN, <i>Plymouth</i> ... ..          | Certificate of Honour.                                              |
| H. BIDWELL, <i>Ely</i> ... ..               | Certificate of Honour.                                              |
| J. R. STADDON, <i>Ipswich</i> ... ..        | Certificate of Honour.                                              |
| W. J. MAURICE, <i>Kennington</i> ... ..     | Certificate of Honour.                                              |

## THIRD YEAR'S STUDENTS.

|                                                     |                                                                                                 |
|-----------------------------------------------------|-------------------------------------------------------------------------------------------------|
| Y. SANEYOSHI, <i>Tokio, Japan</i> ... ..            | { College Prize, £20,<br>and Certificate of Honour.                                             |
| W. B. TOMSON, <i>Luton, Beds.</i> ... ..            | { College Prize, £15, 2nd Tenure<br>of Musgrove Scholarship,<br>£42, and Certificate of Honour. |
| J. P. GLOVER, <i>Lansdowne Road</i> ... ..          | { College Prize, £10,<br>and Certificate of Honour.                                             |
| H. B. ROBINSON, <i>Lower Norwood</i> ... ..         | Certificate of Honour.                                                                          |
| F. F. CAIGER, <i>Gloucester Street, S.W.</i> ... .. | Certificate of Honour.                                                                          |

## ANATOMICAL ASSISTANTS.

|                                             |                        |
|---------------------------------------------|------------------------|
| R. RELTON, <i>Ealing</i> ... ..             | Certificate of Honour. |
| H. B. ROBINSON, <i>Lower Norwood</i> ... .. | Certificate of Honour. |
| Y. SANEYOSHI, <i>Tokio, Japan</i> ... ..    | Certificate of Honour. |

## PROSECTORS.

|                                          |                                        |
|------------------------------------------|----------------------------------------|
| G. A. CARPENTER, <i>Streatham</i> ... .. | { Prize,<br>and Certificate of Honour. |
| R. LAKE, <i>Dover</i> ... ..             | { Prize,<br>and Certificate of Honour. |

## SOLLY MEDAL AND PRIZE.

|                           |                       |
|---------------------------|-----------------------|
| W. A. DUNCAN, M.D. ... .. | Medal and Prize, £25. |
|---------------------------|-----------------------|

## PRACTICAL MEDICINE.

|                              |                                                          |
|------------------------------|----------------------------------------------------------|
| W. HULL, <i>Acton</i> ... .. | { The Mead Medal, founded by<br>Mr. & Mrs. NEWMAN SMITH. |
|------------------------------|----------------------------------------------------------|

## RESIDENT ACCOUCHEURS.

|                     |                        |
|---------------------|------------------------|
| W. F. HASLAM ... .. | Certificate of Honour. |
| H. P. BUTLER ... .. | Certificate of Honour. |
| W. A. DUNCAN ... .. | Certificate of Honour. |
| T. D. ACLAND ... .. | Certificate of Honour. |

## HOUSE PHYSICIANS.

|                 |     |     |     |     |     |     |                        |
|-----------------|-----|-----|-----|-----|-----|-----|------------------------|
| T. D. SAVILL    | ... | ... | ... | ... | ... | ... | Certificate of Honour. |
| G. F. COXWELL   | ... | ... | ... | ... | ... | ... | Certificate of Honour. |
| A. B. CARPENTER | ... | ... | ... | ... | ... | ... | Certificate of Honour. |
| S. W. SUTTON    | ... | ... | ... | ... | ... | ... | Certificate of Honour. |

## ASSISTANT HOUSE PHYSICIANS.

|                  |     |     |     |     |     |     |                        |
|------------------|-----|-----|-----|-----|-----|-----|------------------------|
| C. A. BALLANCE   | ... | ... | ... | ... | ... | ... | Certificate of Honour. |
| M. P. M. COLLIER | ... | ... | ... | ... | ... | ... | Certificate of Honour. |
| A. B. CARPENTER  | ... | ... | ... | ... | ... | ... | Certificate of Honour. |
| H. N. HOLBERTON  | ... | ... | ... | ... | ... | ... | Certificate of Honour. |
| S. W. SUTTON     | ... | ... | ... | ... | ... | ... | Certificate of Honour. |
| A. E. WELLS      | ... | ... | ... | ... | ... | ... | Certificate of Honour. |
| F. W. MARLOW     | ... | ... | ... | ... | ... | ... | Certificate of Honour. |
| R. HEELIS        | ... | ... | ... | ... | ... | ... | Certificate of Honour. |

## HOUSE SURGEONS.

|                  |     |     |     |     |     |     |                        |
|------------------|-----|-----|-----|-----|-----|-----|------------------------|
| T. D. ACLAND     | ... | ... | ... | ... | ... | ... | Certificate of Honour. |
| F. W. MARLOW     | ... | ... | ... | ... | ... | ... | Certificate of Honour. |
| M. P. M. COLLIER | ... | ... | ... | ... | ... | ... | Certificate of Honour. |
| E. F. WHITE      | ... | ... | ... | ... | ... | ... | Certificate of Honour. |

## ASSISTANT HOUSE SURGEONS.

|                  |     |     |     |     |     |     |                        |
|------------------|-----|-----|-----|-----|-----|-----|------------------------|
| S. W. SUTTON     | ... | ... | ... | ... | ... | ... | Certificate of Honour. |
| A. E. WELLS      | ... | ... | ... | ... | ... | ... | Certificate of Honour. |
| E. F. WHITE      | ... | ... | ... | ... | ... | ... | Certificate of Honour. |
| C. W. HAIG BROWN | ... | ... | ... | ... | ... | ... | Certificate of Honour. |

## FOR GENERAL PROFICIENCY AND GOOD CONDUCT.

|                |     |     |     |     |     |     |                               |
|----------------|-----|-----|-----|-----|-----|-----|-------------------------------|
| W. J. SHEPPARD | ... | ... | ... | ... | ... | ... | { The Treasurer's Gold Medal. |
|----------------|-----|-----|-----|-----|-----|-----|-------------------------------|

The following Distinctions have been obtained by Students of St. Thomas's Hospital during the past year:—

The Gold Medal in Medicine at the M.D. Examination of the London University, by Dr. C. E. Sheppard, Resident Assistant Physician.

The Gold Medal in Surgery at the B.S. Examination of the London University, by Mr. C. A. Ballance, M.B.

Dr. A. Newsholme qualified for the Gold Medal in Medicine at the M.D. Examination of the London University.

Mr. C. F. Coxwell obtained the "Murchison Memorial Scholarship," awarded at the Royal College of Physicians, London, for the first time this year.

# THE MUSEUM OF HUMAN AND COMPARATIVE ANATOMY AND PATHOLOGY.

*Curator.*—Mr. C. STEWART.

AMONG the earliest contributors to this Museum were Mr. CLINE, Sir A. COOPER, Mr. TRAVERS, and Mr. TYRRELL.

The Printed Catalogue of the Museum consists of three octavo volumes: in the first volume, edited by Mr. JOHN F. SOUTH, are described the preparations of Healthy Human, Microscopical, and Comparative Anatomy; and the 2nd and 3rd volumes, edited by Mr. SYDNEY JONES, contain descriptions of the specimens illustrative of Pathological Anatomy.

The COLLECTION of HUMAN ANATOMY consists of a Physiological and a Pathological Department: the former contains, besides wax models and casts, a large number of dissected Preparations, illustrating the Organs of Locomotion and Sense; the Nervous System; the Digestive, Respiratory, and Urinary Apparatus; the Vascular System, the Organs of Reproduction, and the Tissues.

The Pathological Division is very rich, containing above 3000 Specimens, arranged in thirty-seven Sections, as follows:

## SECT.

- A. Injuries of Bone: Fractures.
- B. Injuries of Joints: Dislocations.
- C. Diseases of Bone.
- D. Diseases of Joints.
- E. Diseases of the Spinal Column.
- F. Injuries and Diseases of the Muscular System.
- G. Injuries and Diseases of the Eye.
- H. Injuries and Diseases of the Ear.
- I. Injuries and Diseases of the Nose, Antrum, &c.
- K. Injuries and Diseases of the Skin and Subcutaneous Cellular Tissue.
- L. Injuries of the Skull.
- M. Injuries of the Spine.
- N. Injuries and Diseases of the Nervous System.
- O. Injuries and Diseases of Mouth, Fauces, Pharynx, and the Œsophagus.
- P. Injuries and Diseases of the Stomach.
- Q. Injuries and Diseases of the Intestines and Peritoneum.
- R. Intussusception, Internal Strangulation, and Hernia.
- S. Injuries and Diseases of the Liver.
- T. Diseases of the Pancreas and Salivary Glands.
- U. Injuries and Diseases of the Spleen.
- V. Diseases of Thyroid, Thymus, and Suprarenal Capsules.

## SECT.

- W. Injuries and Diseases of the Respiratory Apparatus.
- X. Injuries and Diseases of the Heart and Pericardium.
- Y. Injuries and Diseases of Arteries and Veins.
- Z. Diseases of Lymphatic and Lacteal Vessels and Glands.
- AA. Injuries and Diseases of the Kidneys, and Ureters.
- BB. Injuries and Diseases of the Bladder.
- CC. Diseases of the Prostate Gland and Vesiculæ Seminales, Urinary and Prostatic Calculi.
- DD. Injuries and Diseases of the Penis and Urethra.
- EE. Injuries and Diseases of the Testicles and Scrotum.
- FF. Diseases of the Ovaries and Fallopian Tubes.
- GG. Injuries and Diseases of the Uterus, Vagina, and external organs.
- HH. Diseases and displacements of the Ovary.
- II. Diseases of the Breast.
- KK. Tumours and other allied Morbid Growths.
- LL. Malformations.
- MM. Wax Models and Casts.

BONES, JOINTS, &c.—Amongst the specimens illustrating Injuries of Bones and Joints, are nearly all those described and figured in Sir A. Cooper's Treatise on 'Dislocations and Fractures of the Joints,' and in Cooper's and Travers's 'Surgical Essays.'



This section has been recently much enriched by numerous specimens of gunshot injuries, presented by Sir William Mac Cormac, chiefly fractures from bullet and shell wounds obtained from cases under his treatment during the Franco-German War.

Sir A. Cooper's preparations, illustrating repair after fracture, are contained in this Section.

EYE.—This Section has been arranged by Mr. Dixon, and contains specimens described and figured by Sir A. Cooper, Mr. Travers, and Mr. Saunders.

SKIN.—Several Tumours are contained in this Section, as well as, amongst others, that horny growth, ten inches in length, removed from a man's forehead by Sir A. Cooper.

HEAD, SPINE, NERVOUS SYSTEM.—Showing all kinds of Injuries to the Skull; Spinal Injuries, which have been subjected to operation by Cline, Tyrrell, and South, as well as every variety, frequent and rare, of disease of the Nervous System.

INTESTINES AND PERITONEUM.—Travers's Preparations, illustrating 'The Process of Nature in repairing Injuries of the Intestines,' are contained in this Section. There are also Specimens illustrating the Morbid Anatomy of Fever, &c.

HERNIA.—This Section contains nearly all the Preparations figured and described in 'Cooper's Hernia.' Besides the more common varieties of Hernia, there are Specimens of Mesenteric, Mesocolic, Vesical, Thyroideal, Ischiatic, Perineal, and Phrenic Hernia.

LIVER.—Besides every variety of Liver Disease, this Section contains a large number of Biliary Calculi.

RESPIRATORY AND VASCULAR SYSTEMS.—Amongst these Preparations are two Specimens, showing ligature of the Abdominal Aorta; one of them the case of Sir A. Cooper; the other that of Mr. John F. South. There are also Specimens of spontaneous obliteration of the Aorta.

The Preparations illustrative of Travers's experiments on Arteries and Veins are in the collection.

There are also very interesting Specimens of Diseased Heart, described by Dr. Wells and Dr. Elliotson.

KIDNEYS.—Described and arranged by Mr. Simon.

URINARY CALCULI.—250 in number—analysed by Mr. Heisch and Dr. Bernays.

TESTES.—Most of the preparations figured in Sir A. Cooper's work 'On the Testis,' are contained in this Section.

**MALFORMATIONS.**—This Section contains Specimens of Spina Bifida, Acephalous and double monsters, Ectopia Cordis, Malformations of the Heart, Urinary, and Generative Organs. Most of them have been elaborately described by Mr. R. D. Grainger, and the malformations of the heart are referred to by Dr. Farre and Dr. Peacock in their works. There are also very interesting specimens of malformation described by Dr. Bristowe, Mr. Le Gros Clark, and Mr. Sydney Jones.

The Museum contains a considerable number of valuable Ethnological Specimens.

---

**THE MUSEUM OF COMPARATIVE ANATOMY** contains about 1,000 Preparations, some of them very rare and valuable.

A large number of these Specimens were made by Sir A. Cooper, to illustrate his Lectures, when Professor of Comparative Anatomy to the Royal College of Surgeons.

---

**THE CABINET OF MICROSCOPICAL ANATOMY** contains upwards of 600 injected and other Specimens.

The principal part of these Preparations was made by Mr. Rainey, to illustrate the Histological Course of Lectures; and there are other Preparations described by him in Papers published in the Philosophical Medico-Chirurgical, and Microscopical Transactions, and in other scientific works.

---

**THE MATERIA MEDICA MUSEUM** contains at least 600 specimens, arranged and labelled according to the British Pharmacopœia of 1867, and is now under the superintendence of Dr. STONE.

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**THE MUSEUM OF CHEMISTRY AND MINERALOGY** is under the Superintendence of Dr. Bernays, who founded the Museum and presented the larger part of the Specimens contained in it.

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# St. Thomas's Hospital.

## MEDICAL AND PHYSICAL SOCIETY.

---

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H. H. CLUTTON, Esq.

---

*Vice-Presidents.*

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MR. W. F. MANNERS.

MR. J. P. GLOVER.

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MR. J. S. HUTTON.

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This Society was originated in the early part of the present century by students of the Hospital, and has for its object the reading and discussion of papers on Medicine, Surgery, and subjects of General Interest, the narration of cases, and the exhibition of specimens of Physiological and Pathological interest. The Meetings are held in the Library on alternate Thursdays at 7.30 P.M., and terminate not later than 9.30.

Three Prizes with Certificates of Honour are annually awarded by the Medical School to the authors of the best papers written by the fourth, third, and second year's students respectively, and read before the Society. The annual soir  e is held in December.

Further information can be obtained of the Hon. Secretaries.

# ST. THOMAS'S HOSPITAL REPORTS.

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# OCTOBER, 1882.

|    |    |                                               |
|----|----|-----------------------------------------------|
| 1  | §  | Seventeenth Sunday after Trinity.             |
| 2  | M  | Introductory Address, 3 P.M. Annual Dinner.   |
| 3  | TU | Clinical Clerks and Dressers commence duty.   |
| 4  | W  | Entrance Scholarships Exam., 4th, 5th, & 6th. |
| 5  | TH | Exam. Soc. Apoth., every Thursday.            |
| 6  | F  |                                               |
| 7  | S  |                                               |
| 8  | §  | Eighteenth Sunday after Trinity.              |
| 9  | M  |                                               |
| 10 | TU |                                               |
| 11 | W  |                                               |
| 12 | TH |                                               |
| 13 | F  |                                               |
| 14 | S  |                                               |
| 15 | §  | Nineteenth Sunday after Trinity.              |
| 16 | M  |                                               |
| 17 | TU |                                               |
| 18 | W  | St. Luke.                                     |
| 19 | TH |                                               |
| 20 | F  |                                               |
| 21 | S  |                                               |
| 22 | §  | Twentieth Sunday after Trinity.               |
| 23 | M  |                                               |
| 24 | TU |                                               |
| 25 | W  |                                               |
| 26 | TH |                                               |
| 27 | F  |                                               |
| 28 | S  |                                               |
| 29 | §  | Twenty-first Sunday after Trinity.            |
| 30 | M  |                                               |
| 31 | TU |                                               |

*The Hospital Entrance Science Scholarships Examination takes place during this month.*

*The Registration and Museum Committees meet during this month.*

# NOVEMBER, 1882.

|    |    |                                                                                                                                 |
|----|----|---------------------------------------------------------------------------------------------------------------------------------|
| 1  | W  | All Saints' Day.                                                                                                                |
| 2  | TH | Exam. Soc. Apoth., and every Thursday.                                                                                          |
| 3  | F  |                                                                                                                                 |
| 4  | S  |                                                                                                                                 |
| 5  | S  | Twenty-second Sunday after Trinity.                                                                                             |
| 6  | M  | Univ. Lond. 2nd M.B. Exam.                                                                                                      |
| 7  | TU | [Surgs., & Asst. do.; of Res. Accouch., & Ophth. Asst.*                                                                         |
| 8  | W  | Last day for applications for offices of House Phys. and                                                                        |
| 9  | TH | Prince of Wales born, 1841.                                                                                                     |
| 10 | F  |                                                                                                                                 |
| 11 | S  |                                                                                                                                 |
| 12 | S  | Twenty-third Sunday after Trinity.                                                                                              |
| 13 | M  | [and Surgical Registrarships.                                                                                                   |
| 14 | TU | Notice— 30th, last day for applications for Medical                                                                             |
| 15 | W  | Meeting to appoint House Officers, &c.                                                                                          |
| 16 | TH |                                                                                                                                 |
| 17 | F  |                                                                                                                                 |
| 18 | S  |                                                                                                                                 |
| 19 | S  | Twenty-fourth Sunday after Trinity.                                                                                             |
| 20 | M  |                                                                                                                                 |
| 21 | TU | Univ. Lond. M.B. list published.                                                                                                |
| 22 | W  | Univ. Lond. 2nd M.B. Honours Exam.                                                                                              |
| 23 | TH | Exam. Soc. Apoth.                                                                                                               |
| 24 | F  |                                                                                                                                 |
| 25 | S  |                                                                                                                                 |
| 26 | S  | Twenty-fifth Sunday after Trinity.                                                                                              |
| 27 | M  |                                                                                                                                 |
| 28 | TU |                                                                                                                                 |
| 29 | W  |                                                                                                                                 |
| 30 | TH | <div> <div>Saint Andrew.</div> <div>[Registrarships.</div> <div>Last day for applications for Medical and Surgical</div> </div> |

*Royal College of Surgeons' Primary and Pass Examinations during this Month.*

\* Applications for these appointments to be made to the Secretary, by letter, stating the Student's qualifications, the offices which he has previously held in the Hospital and the number of Maternity Cases attended.

# DECEMBER, 1882.

|    |    |                                                       |
|----|----|-------------------------------------------------------|
| 1  | F  | Princess of Wales born, 1844.                         |
| 2  | S  |                                                       |
| 3  | S  | Advent Sunday.                                        |
| 4  | M  | Univ. Lond. M.D. and M.S. [Assist. commence duty.     |
| 5  | TU | House Phys. and Surgns., Asst. do., R. A. and Ophth.  |
| 6  | W  | Last day for applications for Clinical Clerkships and |
| 7  | TH | [Dresserships.                                        |
| 8  | F  |                                                       |
| 9  | S  |                                                       |
| 10 | S  | Second Sunday in Advent.                              |
| 11 | M  |                                                       |
| 12 | TU |                                                       |
| 13 | W  | Meeting to appoint Clinical Clerks and Dressers.      |
| 14 | TH |                                                       |
| 15 | F  |                                                       |
| 16 | S  |                                                       |
| 17 | S  | Third Sunday in Advent.                               |
| 18 | M  | 1st Sessional Examination commences.                  |
| 19 | TU |                                                       |
| 20 | W  |                                                       |
| 21 | TH | Saint Thomas.                                         |
| 22 | F  |                                                       |
| 23 | S  | Last day for Certs., for Matric. Exam., Univ., Lond.  |
| 24 | S  | Fourth Sunday in Advent.                              |
| 25 | M  | Christmas Day.                                        |
| 26 | TU |                                                       |
| 27 | W  |                                                       |
| 28 | TH |                                                       |
| 29 | F  |                                                       |
| 30 | S  |                                                       |
| 31 | S  | First Sunday after Christmas.                         |

# JANUARY, 1883.

|    |                |                                                |
|----|----------------|------------------------------------------------|
| 1  | M              | Vacation terminates, and Lectures re-commence. |
| 2  | T <sub>U</sub> | Clinical Clerks and Dressers commence duty.    |
| 3  | W              |                                                |
| 4  | T <sub>H</sub> |                                                |
| 5  | F              |                                                |
| 6  | S              |                                                |
| 7  | §              | First Sunday after Epiphany.                   |
| 8  | M              | Lond. Univ. Matric.                            |
| 9  | T <sub>U</sub> |                                                |
| 10 | W              |                                                |
| 11 | T <sub>H</sub> |                                                |
| 12 | F              |                                                |
| 13 | S              |                                                |
| 14 | §              | Second Sunday after Epiphany.                  |
| 15 | M              |                                                |
| 16 | T <sub>U</sub> |                                                |
| 17 | W              |                                                |
| 18 | T <sub>H</sub> |                                                |
| 19 | F              |                                                |
| 20 | S              |                                                |
| 21 | §              | Septuagesima Sunday.                           |
| 22 | M              |                                                |
| 23 | T <sub>U</sub> |                                                |
| 24 | W              |                                                |
| 25 | T <sub>H</sub> |                                                |
| 26 | F              |                                                |
| 27 | S              |                                                |
| 28 | §              | Sexagesima Sunday.                             |
| 29 | M              | Matric. Pass List Univ. Lond. published.       |
| 30 | T <sub>U</sub> |                                                |
| 31 | W              |                                                |

*Royal College of Surgeons' Primary and Pass Examinations during this month.  
The Registration and Museum Committees meet during this month.*



# FEBRUARY, 1883.

|    |    |                                                          |
|----|----|----------------------------------------------------------|
| 1  | TH |                                                          |
| 2  | F  |                                                          |
| 3  | S  |                                                          |
| 4  | S  | Quinquagesima Sunday.                                    |
| 5  | M  |                                                          |
| 6  | TU | [Surgns., of Asst. Surgns., and of R.A.*                 |
| 7  | W  | Last day for applications for offices of House Phys. and |
| 8  | TH |                                                          |
| 9  | F  |                                                          |
| 10 | S  |                                                          |
| 11 | S  | First Sunday in Lent.                                    |
| 12 | M  |                                                          |
| 13 | TU |                                                          |
| 14 | W  | Meeting to appoint House Officers, &c.                   |
| 15 | TH |                                                          |
| 16 | F  |                                                          |
| 17 | S  |                                                          |
| 18 | S  | Second Sunday in Lent.                                   |
| 19 | M  |                                                          |
| 20 | TU |                                                          |
| 21 | W  |                                                          |
| 22 | TH |                                                          |
| 23 | F  |                                                          |
| 24 | S  |                                                          |
| 25 | S  | Third Sunday in Lent.                                    |
| 26 | M  |                                                          |
| 27 | TU |                                                          |
| 28 | W  |                                                          |

\* Applications for these appointments to be made to the Secretary, by letter, stating the Student's qualifications, the offices which he has previously held in the Hospital, and the number of Maternity Cases attended.

# MARCH, 1883.

|    |    |                                                                                        |
|----|----|----------------------------------------------------------------------------------------|
| 1  | TH | St. David.                                                                             |
| 2  | F  |                                                                                        |
| 3  | S  |                                                                                        |
| 4  | S  | Fourth Sunday in Lent.                                                                 |
| 5  | M  | [commence duty.                                                                        |
| 6  | TU | House Physns. and Surgns., and Asst. do., also R. A.                                   |
| 7  | W  | Last day for applications for appointments of Clinical                                 |
| 8  | TH | [Clerks and Dressers.                                                                  |
| 9  | F  |                                                                                        |
| 10 | S  |                                                                                        |
| 11 | S  | Fifth Sunday in Lent.                                                                  |
| 12 | M  |                                                                                        |
| 13 | TU |                                                                                        |
| 14 | W  | Meeting to select Clinical Clerks and Dressers.                                        |
| 15 | TH |                                                                                        |
| 16 | F  |                                                                                        |
| 17 | S  |                                                                                        |
| 18 | S  | Palm Sunday.                                                                           |
| 19 | M  | Sessional examination commences.                                                       |
| 20 | TU |                                                                                        |
| 21 | W  |                                                                                        |
| 22 | TH |                                                                                        |
| 23 | F  | Good Friday.                                                                           |
| 24 | S  |                                                                                        |
| 25 | S  | Easter Day.                                                                            |
| 26 | M  |                                                                                        |
| 27 | TU |                                                                                        |
| 28 | W  |                                                                                        |
| 29 | TH |                                                                                        |
| 30 | F  |                                                                                        |
| 31 | S  | { Registrar's Report for last year due.<br>Last Day for Reports for Solly Medal, 1884. |

# APRIL, 1883.

|    |    |                                             |
|----|----|---------------------------------------------|
| 1  | S  | Low Sunday.                                 |
| 2  | M  |                                             |
| 3  | TU | Clinical Clerks and Dressers commence duty. |
| 4  | W  |                                             |
| 5  | TH |                                             |
| 6  | F  |                                             |
| 7  | S  |                                             |
| 8  | S  | Second Sunday after Easter.                 |
| 9  | M  |                                             |
| 10 | TU |                                             |
| 11 | W  |                                             |
| 12 | TH |                                             |
| 13 | F  |                                             |
| 14 | S  |                                             |
| 15 | S  | Third Sunday after Easter.                  |
| 16 | M  |                                             |
| 17 | TU |                                             |
| 18 | W  |                                             |
| 19 | TH |                                             |
| 20 | F  |                                             |
| 21 | S  |                                             |
| 22 | S  | Fourth Sunday after Easter.                 |
| 23 | M  |                                             |
| 24 | TU |                                             |
| 25 | W  |                                             |
| 26 | TH |                                             |
| 27 | F  |                                             |
| 28 | S  |                                             |
| 29 | S  | Fifth Sunday after Easter.                  |
| 30 | M  |                                             |



*Royal College of Surgeons' Primary and Pass Examinations during this month.*  
*The Examinations for the Mead and Cheselden Medals take place this month.*  
*The Annual Inspection of the Museum and meeting of Museum Committee take place during this month.*  
*The Registration Committee meets during this month.*  
*Preliminary Examination in Arts of Apothecaries Society held this month.*

# MAY, 1883.

|    |    |                                                        |
|----|----|--------------------------------------------------------|
| 1  | TU | Summer Session commences.                              |
| 2  | W  |                                                        |
| 3  | TH | Ascension Day.                                         |
| 4  | F  |                                                        |
| 5  | S  |                                                        |
| 6  | S  | Sunday after Ascension.                                |
| 7  | M  |                                                        |
| 8  | TU | [and Surgns., and Asst. do., of R. A., & Ophth. Asst.* |
| 9  | W  | Last day for applications for offices of House Phys.   |
| 10 | TH |                                                        |
| 11 | F  | [H.M. the Queen, 1868.                                 |
| 12 | S  | First Stone of St. Thomas's New Hospital laid by       |
| 13 | S  | Whit Sunday.                                           |
| 14 | M  |                                                        |
| 15 | TU | [Asst.                                                 |
| 16 | W  | Meeting to appoint House Officers, R. A. and Ophth.    |
| 17 | TH |                                                        |
| 18 | F  |                                                        |
| 19 | S  |                                                        |
| 20 | S  | Trinity Sunday.                                        |
| 21 | M  |                                                        |
| 22 | TU |                                                        |
| 23 | W  |                                                        |
| 24 | TH | Queen Victoria born, 1819.                             |
| 25 | F  |                                                        |
| 26 | S  |                                                        |
| 27 | S  | First Sunday after Trinity.                            |
| 28 | M  |                                                        |
| 29 | TU |                                                        |
| 30 | W  |                                                        |
| 31 | TH |                                                        |

*Royal College of Surgeons' Primary and Pass Examinations during this Month.*

\* Applications for these appointments to be made to the Secretary, by letter, stating the Student's qualifications, the offices which he has previously held in the Hospital, and the number of Maternity Cases attended.



# JUNE, 1883.

|    |    |                                                             |
|----|----|-------------------------------------------------------------|
| 1  | F  |                                                             |
| 2  | S  |                                                             |
| 3  | S  | Second Sunday after Trinity.                                |
| 4  | M  | [Ophth. Asst. commence duty.                                |
| 5  | TU | House Phys. and Surgns., and Asst. do., R. A. and           |
| 6  | W  | Last day for applications for appointments of Clinical      |
| 7  | TH | [Clerks and Dressers.                                       |
| 8  | F  |                                                             |
| 9  | S  |                                                             |
| 10 | S  | Third Sunday after Trinity.                                 |
| 11 | M  |                                                             |
| 12 | TU |                                                             |
| 13 | W  | Meeting to select Clinical Clerks and Dressers.             |
| 14 | TH |                                                             |
| 15 | F  |                                                             |
| 16 | S  |                                                             |
| 17 | S  | Fourth Sunday after Trinity.                                |
| 18 | M  | Matriculation Lond. Univ.                                   |
| 19 | TU |                                                             |
| 20 | W  |                                                             |
| 21 | TH | New St. Thomas's Hospital opened by H. M. the Queen, [1871. |
| 22 | F  |                                                             |
| 23 | S  |                                                             |
| 24 | S  | Fifth Sunday after Trinity.                                 |
| 25 | M  |                                                             |
| 26 | TU |                                                             |
| 27 | W  |                                                             |
| 28 | TH | Queen Victoria crowned, 1838.                               |
| 29 | F  |                                                             |
| 30 | S  |                                                             |

*The Harveian Oration is delivered at the Royal College of Physicians annually in the month of June.*

*Doctor of Science Examination at London University takes place within the first 21 days of June.*

*Distribution of Prizes for past Sessions during this month.*

# JULY, 1883.

|    |    |                                                    |
|----|----|----------------------------------------------------|
| 1  | §  | Sixth Sunday after Trinity.                        |
| 2  | M  |                                                    |
| 3  | TU | Clinical Clerks and Dressers commence duty.        |
| 4  | W  |                                                    |
| 5  | TH |                                                    |
| 6  | F  |                                                    |
| 7  | S  |                                                    |
| 8  | §  | Seventh Sunday after Trinity.                      |
| 9  | M  |                                                    |
| 10 | TU | [Officers for September.                           |
| 11 | W  | Last day for applications for appointment of House |
| 12 | TH |                                                    |
| 13 | F  |                                                    |
| 14 | S  |                                                    |
| 15 | §  | Eighth Sunday after Trinity.                       |
| 16 | M  | Preliminary Science London University Examination. |
| 17 | TU |                                                    |
| 18 | W  | Meeting to appoint House Officers for September.   |
| 19 | TH |                                                    |
| 20 | F  |                                                    |
| 21 | S  |                                                    |
| 22 | §  | Ninth Sunday after Trinity.                        |
| 23 | M  | Sessional Examination commences.                   |
| 24 | TU |                                                    |
| 25 | W  |                                                    |
| 26 | TH |                                                    |
| 27 | F  |                                                    |
| 28 | S  |                                                    |
| 29 | §  | Tenth Sunday after Trinity.                        |
| 30 | M  |                                                    |
| 31 | TU |                                                    |

*Royal College of Surgeons' Primary and Pass Examinations during this Month.  
The Registration and Museum Committees meet during this month.*

# AUGUST, 1883.

|    |    |                                  |
|----|----|----------------------------------|
| 1  | W  |                                  |
| 2  | Th |                                  |
| 3  | F  |                                  |
| 4  | S  |                                  |
| 5  | S  | Eleventh Sunday after Trinity.   |
| 6  | M  |                                  |
| 7  | Tu |                                  |
| 8  | W  |                                  |
| 9  | Th |                                  |
| 10 | F  |                                  |
| 11 | S  |                                  |
| 12 | S  | Twelfth Sunday after Trinity.    |
| 13 | M  |                                  |
| 14 | Tu |                                  |
| 15 | W  |                                  |
| 16 | Th |                                  |
| 17 | F  |                                  |
| 18 | S  |                                  |
| 19 | S  | Thirteenth Sunday after Trinity. |
| 20 | M  |                                  |
| 21 | Tu |                                  |
| 22 | W  |                                  |
| 23 | Th |                                  |
| 24 | F  |                                  |
| 25 | S  |                                  |
| 26 | S  | Fourteenth Sunday after Trinity. |
| 27 | M  |                                  |
| 28 | Tu |                                  |
| 29 | W  |                                  |
| 30 | Th |                                  |
| 31 | F  |                                  |

SEPTEMBER, 1883.

|    |    |                                                      |
|----|----|------------------------------------------------------|
| 1  | S  |                                                      |
| 2  | S  | Fifteenth Sunday after Trinity.                      |
| 3  | M  | [commence duty.                                      |
| 4  | TU | House Phys. and Surgns., and Asst. do., also R. A.   |
| 5  | W  | Last day for applications for appointments of Ward   |
| 6  | TH | [Clerks, Clinical Clerks, and Dressers.              |
| 7  | F  |                                                      |
| 8  | S  |                                                      |
| 9  | S  | Sixteenth Sunday after Trinity.                      |
| 10 | M  |                                                      |
| 11 | TU |                                                      |
| 12 | W  | Meeting to appoint Clerks and Dressers.              |
| 13 | TH |                                                      |
| 14 | F  |                                                      |
| 15 | S  |                                                      |
| 16 | S  | Seventeenth Sunday after Trinity.                    |
| 17 | M  |                                                      |
| 18 | TU |                                                      |
| 19 | W  |                                                      |
| 20 | TH |                                                      |
| 21 | F  |                                                      |
| 22 | S  |                                                      |
| 23 | S  | Eighteenth Sunday after Trinity.                     |
| 24 | M  |                                                      |
| 25 | TU |                                                      |
| 26 | W  |                                                      |
| 27 | TH |                                                      |
| 28 | F  | [1883, to be awarded in 1884.                        |
| 29 | S  | Announcement of subject and date for Grainger Prize, |
| 30 | S  | Nineteenth Sunday after Trinity.                     |

*Royal College of Surgeons' and Apothecaries' Hall Preliminary Examinations in General Knowledge this month.*



## LIST OF STUDENTS

WHO HAVE OBTAINED

## Honours in the Annual Examinations.

*w refers to Winter and s to Summer Session.**The Addresses are those given at the time of Entry.***ACLAND (T. D.), Oxford.**w 1877-8. 3rd Year Physical Society's Prize.  
Paper published in Hospital Reports, Vol. VIII.

w 1878-9. 4th Year Student. The Mead Medal.

**ADDY (B.), West Deeping, Lincolnshire.**

1869. 1st Year Student, 1st College Prize;

Physical Society's 1st Year's Prize.

1870. 2nd Year Student, 1st Coll. Prize;  
Physical Society's 2nd Year's Prize.1871. 3rd Year Student, 1st Coll. Prize;  
Prosecutor's Prize;  
Treasurer's Gold Medal.**ALLINGHAM (W.),\* Bermondsey.**

1852. Descriptive Anatomy, Hon. Cert.;

Chemistry, Hon. Cert.

1853. Midwifery, Hon. Cert.

1854. Medicine, Hon. Cert.;

Descriptive Anatomy, Prize;

Midwifery, Hon. Cert.;

Physical Society's Essay, Prize;

Surgery, Prize;

Physiology, Hon. Cert.

1855. Medicine, Prize;

Descriptive Anatomy, Hon. Cert.;

Physiology, Hon. Cert.;

Clinical Medicine, President's Prize;

Clinical Medicine, Treasurer's Prize.

**ANDERSON (W.),† Clapham, Surrey.**

1865. 1st Year Student, 3rd Coll. Prize.

1866. 2nd Year Student, 3rd Coll. Prize.

1867. 3rd Year Student, 1st Coll. Prize;

Physical Society's 3rd Year's Prize;

Cheselden Medal.

**ARMSTRONG (H. G.), Reading.**

s 1872. 1st Year Student, Hon. Cert.

w 1874. 3rd Year Student, 3rd Coll. Prize.

\* Late Surgical Tutor, Surgeon to Great Northern Hospital, Surgeon to St. Mark's Hospital.

† Assistant Surgeon to, and Joint Lecturer on Anatomy, Examiner in Anatomy and Physiology, Royal College of Physicians, formerly Demonstrator of Anatomy, and Surgical Registrar at St. Thomas's Hospital, late Medical Officer to H.B.M. Legation in Japan, and Professor of Medical Sciences at the Japanese Naval Medical College, Jeddo.

**ATKINSON (F. P.), Kew.**

1861. 1st Year Matriculation Examination—Classics and Mathematics, Hon. Cert.

**ATKINSON (J.), Kirkby-Lonsdale.**

1853. Chemistry, Hon. Cert.

**AVELING (C. T.), Shacklewell.**1863. Matriculation Examination—  
Physics and Natural History,  
1st College Prize;

1st Year Student, 1st College Prize.

1864. 2nd Year Student, 2nd College Prize.

1865. 3rd Year Student, 3rd College Prize.

**BAILEY (J. H. T.), Greenwich.**

1843. Materia Medica, Hon. Cert.

**BAIN (J.)**

1855. Midwifery, Hon. Cert.

**BALLANCE (C. A.), Lower Clapton.**

w 1875-6. 1st Year Student, Hon. Cert.

w 1876-7. 3rd Year Student, 3rd College Prize, and Physical Society's 3rd Year's Prize;

1880. The Solly Medal and Prize.

**BARKER (F. R.), Aldershot.**

w 1875. Prosecutor's Prize.

**BARRON (H. J.), Guilford Street, Russell Square.**

w 1877-8. 2nd Year Student, Prosecutor's Prize.

**BARWELL (R.) ‡ Norwich.**

1817. Medicine, Hon. Cert.;

Midwifery, Hon. Cert.

1848. Physical Society's Essay, Treasurer's Prize;

Physiology and Anatomy, Hon. Cert.;

Midwifery, Hon. Cert.;

Dresser's Surg. Repts., Hon. Cert.

1850. Clinical Medicine, Prize.

**BATESON (J. M.), Kirkby-Lonsdale.**

1855. Chemistry, Hon. Cert.

**BATTLE (W. H.), Hanworth, Lincolnshire.**

s 1874. Hon. Cert.

w 1875. 2nd Year Student, 3rd College Prize.

w 1876-7. 3rd Year Student, The First Solly Medal and Prize.

‡ Surgeon to Charing Cross Hospital.

**BEAL (P.), Plymouth.**  
1844. Chemistry, 2nd Prize.

**BEARDSLEY (A.), Shipley, Derby.**  
1843. Midwifery, 2nd Prize.

**BEDFORD (R. J.),\* Sleaford.**  
1858. Midwifery, Hon. Cert.

**BENWELL (H. D.), Greenwich.**  
1843. Chemistry, 2nd Prize.  
1845. Physiology and Anatomy, Medal.  
1847. Clinical Medical Reports, Prize;  
Gen. Proficiency, Trea. Medal.

**BELL (C. N.), Rochester.**  
1867. 3rd Year Student, 3rd Coll. Prize.

**BELL (J. V.), Rochester.**  
1859. 1st Year Student, Treasurer's 2nd  
Prize; Matriculation Examination—Classics and Mathematics,  
Hon. Cert.  
1860. 2nd Year Student, Hon. Cert.  
1861. 3rd Year Student, 3rd Coll. Prize.

**BERNAYS (H. L.), Chatham.**  
w 1873. Prosector's Prize.

**BERNAYS (A. V.), Great Stanmore.**  
s 1876. 1st Year Student, Hon. Cert.  
w 1880-81. 3rd Year Student, 1st Coll. Prize.

**BICKLE (L. W.), St. Leonard's-on-Sea.**  
s 1878. 1st Year Student, 3rd Coll. Prize;  
s 1879. 2nd Year Student, 1st Coll. Prize.

**BIDDLE (D.), Wotton-under-Edge.**  
1860. 1st Year Student, Trea. Prize;  
Matriculation Exam.—Prize.  
1861. 2nd Year Student, Hon. Cert.  
1862. 3rd Year Student, Hon. Cert.

**BIRTWELL (H. H.), Enfield, Lancashire.**  
1865. 3rd Year Student, Hon. Cert.

**BLACK (J.), Kentish Town.**  
w 1872. 2nd Year Student, Prosector's Prize.

**BLACK (W. S.), Chesterfield, Derby.**  
1855. Midwifery, Hon. Cert.;  
Medicine, Hon. Cert.

**BLACKETT (W. C.), Durham.**  
1851. Descriptive Anatomy, Hon. Cert.

**BLADES (C. C.)**  
1855. Midwifery, Hon. Cert.

**BONE (W.), Camberwell.**  
1857. 1st Year Student, Trea. 1st Prize.  
1858. 2nd Year Student, Trea. 1st Prize.

**BONSER (J. H.), Sutton-in-Ashfield.**  
1871. 3rd Year Student, 2nd Coll. Prize;  
Cheselden Medal.

**BOULGER (J.), Gravesend.**  
1870. 1st Year Student, Sir Wm. Tite's  
Scholarship.  
1871. 2nd Year, Sir W. Tite's Scholarship.  
w 1872. 3rd Year, Sir W. Tite's Scholarship.

\* Late Assistant-Surgeon at the "Dreadnought" Hospital Ship.

**BOWEN (E.), Llyn, Gwair, Pembroke.**

1847. Descriptive and Surgical Anatomy,  
Hon. Cert.;  
Materia Medica, Hon. Cert.  
1848. Descriptive and Surgical Anatomy,  
Hon. Cert.;  
Physiology and Anatomy, Hon.  
Cert.;  
Botany, Hon. Cert.;  
Comparative Anatomy, Hon. Cert.

**BOWN (J. Y.), America.**  
1848. Descriptive and Surgical Anatomy,  
Hon. Cert.

**BRAKE (J.), Holt, Wilts.**  
1851. Matriculation Scholarship, Hon.  
Cert.;  
Descriptive Anatomy, Hon. Cert.;  
1st Year Student, Scholarship;  
Chemistry, Hon. Cert.  
1852. 2nd Year Student, Scholarship;  
Physiology, Prize;  
Materia Medica, Hon. Cert.  
Botany, Hon. Cert.;  
Medicine, Hon. Cert.  
1853. 3rd Year Student, Scholarship;  
Clinical Medicine, Trea. Prize;  
Midwifery, Prize;  
Forensic Medicine, Prize.

**BRISTOWE (J. S.),† Camberwell.**  
1847. Medicine, Hon. Cert.;  
Physiology and Anatomy, Hon.  
Cert.;  
Descriptive and Surgical Anatomy  
Prize.  
1848. Descriptive and Surgical Anatomy,  
Hon. Cert.;  
Physiology and Anatomy, Prize;  
Practical Chemistry, Prize;  
Botany, Prize;  
Midwifery, Hon. Cert.;  
Comparative Anatomy, Prize;  
Surgery, Prize;  
General Proficiency, Treasurer's  
Medal.

**BRITTON (T.), Doncaster.**  
1861. 1st Year Student, Hon. Cert.

**BROCK (J.), Northwich.**  
w 1872. 1st Year Student, 2nd Coll. Prize.  
s 1872. Hon. Cert.

**BROWN (F. G.), London.**  
1860. 1st Year Student, Hon. Cert.  
1861. 2nd Year Student, 3rd Coll. Prize.  
1862. 3rd Year Student, 3rd Coll. Prize.

**BROWN (G. D.), Croydon.**  
1851. Physiology, Hon. Cert.;  
Botany, Prize;  
Surgery, Hon. Cert.;  
1852. Physiology, Hon. Cert.;  
Physical Society's Essay, Trea-  
surer's Prize;  
Medicine, Hon. Cert.;  
Pathology, Prize.

**BROWN (T. J. E.), Dorchester.**  
1848. Practical Midwifery, Hon. Cert.

**BUCKNILL (E. R.), Bedford.**  
1855. 1st Year Student, Scholarship;  
Midwifery, Hon. Cert.;

† Physician to and Joint Lecturer on  
Medicine at St. Thomas's Hospital. Late  
Lecturer on General Pathology.

- Chemistry, Hon. Cert.;  
 Descriptive Anatomy, Hon. Cert.;  
 Materia Medica, Hon. Cert.
- BULL (J.), Norwood, Surrey.**  
 1848. Midwifery, Hon. Cert.
- BUTLER (W.), Stoke Newington.**  
 1845. Materia Medica, Hon. Cert.
- CAIGER (F. F.), Gloucester-st., S.W.**  
 w 1879-80. 1st Year Student, 3rd Coll. Prize.  
 w 1880-81. 2nd Year Student, 3rd Coll. Prize.
- CARPENTER (A.),\* Rothwell.**  
 1848. Descriptive and Surgical Anatomy, Hon. Cert.;  
 Chemistry Prize;  
 Materia Medica, Hon. Cert.;  
 Matriculation Scholarship, Prize.
1849. Physiology Hon. Cert.;  
 Midwifery, Hon. Cert.;  
 Descriptive Anatomy, 1st Prize;  
 Medicine, 2nd Prize.
1850. Physiology, Hon. Cert.;  
 Descriptive Anatomy, Hon. Cert.;  
 Botany, Prize;  
 Medicine, Prize;  
 Surgery, Prize; [Medal.  
 General Proficiency Treasurer's
1851. (Accoucheur) Midwifery, Prize;  
 Essay on Chorea, Mr. N. Smith's Prize.
1852. Surgical Reports, President's Prize;  
 Medical Reports, Dr. Roots' Prize;  
 Ophthalmic Reports, a Governor's Prize;  
 Clinical Medicine, Senior Prize.
- CARPENTER (A. B.), Croydon.**  
 w 1876-7. 1st Year Student, Hon. Cert.;
- CARPENTER (G. A.), Streatham.**  
 w. 1880-81. 1st Year Student, 3rd Coll. Prize.  
 s 1881. 1st Coll. Prize.  
 w 1881-2. 2nd Year, 3rd Coll. Prize.  
 Prosecutor's Prize.
- CARR (J. T.), Bombay.**  
 1844. Surgery, Prize.
- CASTLE (H.), Newport, I. of Wight.**  
 w 1874-5 1st Year Student, 2nd Coll. Prize.  
 s 1875. 3rd College Prize.  
 w 1876-7. Physical Society's 3rd Year's Prize.
- CAULDE (A. W. W.), Henfield, Sussex.**  
 1858. Clinical Medicine, Prize.
- CHALDECOTT (C. W.), Dorking.**  
 1849. Descriptive Anatomy, Hon. Cert.;  
 Chemistry, Hon. Cert.;  
 Materia Medica, 2nd Prize;  
 1st Year Student, Scholarship.
1850. Physiology, Hon. Cert.  
 Surgery, Prize.
1851. Physiology, Prize;  
 Descriptive Anatomy, Hon. Cert.;  
 Medicine, Hon. Cert.;  
 Physical Society's Essay, Treasurer's Prize;  
 Surgery, Hon. Cert.;  
 General Proficiency, Treasurer's Silver Medal.
- CHALDECOTT (T. A.), Newington.**  
 1848. Descriptive Surgical Anatomy, Hon. Cert.;  
 Chemistry, Hon. Cert.;  
 Botany, Hon. Cert.;  
 Materia Medica, Hon. Cert.

- Comparative Anat., Hon. Cert.;  
 Matriculation Scholarship, Prize;  
 Practical Chemistry Hon. Cert.
1849. Physiology, Hon. Cert.;  
 Midwifery, Hon. Cert.;  
 Surgery, 2nd Prize;  
 Medicine, Hon. Cert.
1850. Physiology, Hon. Cert.;  
 Forensic Medicine, Prize;  
 Pathology, Prize;  
 Medicine, Hon. Cert.;  
 Surgery, Hon. Cert.
- CHAPMAN (C. E.), Preston.**  
 1855. Midwifery, Hon. Cert.;  
 Materia Medica, Hon. Cert.
1857. Clinical Assistant, Prize;  
 Physical Society's Essay, Prize.
- CHERRY (A. H.), Clapham.**  
 1845. Clinical Medicine, Hon. Cert.
- CHIPPERFIELD (W. N.), Reading.**  
 1852. 1st Year Student, Scholarship;  
 Descriptive Anatomy, Prize.
1853. 2nd Year Student, Scholarship;  
 Physiology, Prize;  
 Descriptive Anatomy, Prize;<sup>1</sup>  
 Midwifery, Prize;  
 Physical Society's Essay, Prize;  
 Medicine, Prize;  
 Surgery, Prize.
1854. 3rd Year Student, Scholarship.  
 Medicine, Prize;  
 Descriptive Anatomy, Hon. Cert.  
 Midwifery, Prize;  
 Physical Society's Essay, Treasurer's Prize;  
 Forensic Medicine, Prize;  
 Chemistry, Hon. Cert.;  
 Comparative Anatomy, Prize;  
 Pathology, Prize;  
 Surgery and Surgical Anatomy, Cheselden Medal;  
 Clinical Medicine, Treasurer's Prize;  
 Physiology, Prize;  
 General Proficiency, Treasurer's Medal.
- CLAPTON (E.),† Stamford.**  
 1851. Matriculation Scholarship, Hon. Cert.  
 1st Year Student, 1st Scholarship;  
 Descriptive Anatomy, Prize;  
 Chemistry, Prize.
1852. 2nd Year Student, Scholarship;  
 Physiology, Prize;  
 Materia Medica, Prize;  
 Botany, Prize;  
 Medicine, Hon. Cert.
1853. 3rd Year Student, Scholarship;  
 Physiology, Hon. Cert.;  
 Clinical Medicine, Treasurer's Prize;  
 Midwifery, Hon. Cert.;  
 Physical Society's Essay, Treasurers' Prize;  
 Medicine, Hon. Cert.;  
 Forensic Medicine, Hon. Cert.;  
 Chemistry, Hon. Cert.;  
 Surgery, Hon. Cert.
1854. Ophthalmic Reports, Governor's Prize;  
 Clinical Medicine, Mr. N. Smith's Prize.

\* Lecturer on State Medicine at St. Thomas's Hospital.

† Late Physician to and Lecturer on Materia Medica at St. Thomas's Hospital. Physician to the Magdalen Hospital.



**CLAPTON (W.), Stamford.**

1855. Midwifery, Hon. Cert.;  
Descriptive Anatomy, Hon. Cert.;  
Materia Medica, Prize.  
1856. Clinical Medicine, Prize.  
1858. Midwifery, Hon. Cert.

**CLARKE (A.), Dorking.**

1856. 1st Year Student, Treasurer's 2nd Prize.

**CLARK (J. H.), Jamaica.**

1867. 2nd Year Student, Physical Society's 2nd Year's Prize.

**CLARKSON (J. W.), Surbiton.**

- w 1872. 2nd Year Student, 3rd Coll. Prize.  
w 1873. 3rd Year Student, 2nd Coll. Prize;  
Surgery and Surgical Anatomy,  
Hon. Cert.

**CLEGHORN (G.), Bedford.**

1872. 3rd Year Student, Hon. Cert.

**COGGINS (T.), Hayford, Woodstock.**

1847. Chemistry, Hon. Cert.  
1848. Descriptive and Surgical Anatomy,  
Hon. Cert.;  
Midwifery, Hon. Cert.  
1849. Midwifery, Hon. Cert.;  
Medicine, Hon. Cert.  
1850. Surgical Reports, Prize;  
(Accoucheur) Midwifery, Hon.  
Cert.

**COLBY (W. T.), Malton, York.**

1849. Descriptive Anatomy, Hon. Cert.;  
Midwifery, Hon. Cert.

**COLLIER (T. P.), Worship Square.**

1847. Practical Midwifery, Prize.

**COMPLIN (E. J.), Charterhouse Square.**

1851. Clinical Medicine, Prize;  
Medical Cases, President's Prize;  
Surgery, Hon. Cert.  
1852. Midwifery, Hon. Cert.;  
Pathology, Hon. Cert.

**COOK (W.), Gainsboro'.**

1844. Chemistry, Hon. Cert.;  
Materia Medica, Hon. Cert.

**COOKE (J.), Stamford.**

1855. Comparative Anatomy, Prize;  
Midwifery, Hon. Cert.;  
Physiology, Hon. Cert.

**CORY (R.),\* Carlisle.**

1870. Physical Society's 3rd Year's Prize.

**COUSINS (J. W.), Portsea.**

1864. Descriptive Anatomy, Hon. Cert.;  
Chemistry, Hon. Cert.  
1855. Surgery, Prize;  
Midwifery, Prize;  
Midwifery, Hon. Cert.  
1856. Clinical Medicine, Prize;  
Surgery and Surgical Anatomy,  
Cheselden Medal.

**COWEN (P.), Kennington.**

1862. 1st Year Student, 2nd Coll. Prize.  
1863. 2nd Year Student, 2nd Coll. Prize.  
1864. 3rd Year Student, 2nd Coll. Prize.

**COX (E.), Maiden Newton, Dorset shire.**

1866. 1st Year Student, 3rd Coll. Prize.  
1868. 3rd Year Student, 2nd Coll. Prize.

**COXWELL (C. F.), Brighton.**

1880. 4th Year Student, the Mead Medal.

**CRICK (S.A.), Cosby-hill, Leicester-shire.**

- s 1875. 1st Year Student, Hon. Cert.  
w 1875-6. Prosecutor's Prize.  
w 1876-7. 3rd Year Student, 3rd Coll. Prize.

**CROFT (J.),† Clapton.**

1851. Descriptive Anatomy, Hon. Cert.  
1853. Midwifery, Hon. Cert.

**CROFTS (W. C.), Rowston, Lincoln.**

1855. Surgery, Hon. Cert.;  
Midwifery, Hon. Cert.

**CROSBY (T. B.), Gosberton, Lincoln.**

1851. Physiology, Prize;  
Descriptive Anatomy, Prize;  
Medicine, Prize;  
Surgery, Prize.  
1852. Physiology, Prize;  
Descriptive Anatomy, Hon. Cert.;  
Medicine, Hon. Cert.;  
Forensic Medicine, Prize;  
Practical Chemistry, Prize;  
Surgery, Hon. Cert.;  
Surgery and Surgical Anatomy,  
Bronze Cheselden Medal;  
Comparative Anatomy, Prize.

**CROSSMAN (J.), Redruth.**

1871. Physical Society's 1st Year's Prize.  
1872. Physical Society's 2nd Year's Prize.  
1873. Physical Society's 3rd Year's Prize

**DAVIES (D.), Carmarthenshire.**

1843. Chemistry, 1st Prize;  
Midwifery, Hon. Cert.;  
Materia Medica, Prize.  
1844. Medicine, Hon. Cert.;  
Physiology and Anatomy, Hon.  
Cert.  
1845. Clinical Surgical Reports, Medal.

**DAVIES (D. S.), Bristol.**

- 1875-6. Physical Society's 1st Year's Prize.

**DAY (W. H.), Norwich.**

1844. Surgery, Prize;  
Physical Society's Essay, Hon.  
Cert.;  
Dresser's Clinical Surgery, Prize.

**DECK (J. F.), Nelson, New Zealand.**

1860. 1st Year Student, 1st Coll. Prize.  
1861. 2nd Year Student, 1st Coll. Prize;  
Physical Society's Prize.  
1862. 3rd Year Student, 1st Coll. Prize;  
Physical Society's Prize;  
Cheselden Medal;  
Treasurer's Gold Medal.

**DICKERSON (S. H.), Hartest, Suffolk.**

1853. Physiology, Hon. Cert.;  
Materia Medica, Hon. Cert.;  
Midwifery, Hon. Cert.;  
Medicine, Hon. Cert.

\* Assistant Obstetric Physician to and Joint Lecturer on Forensic Medicine at St. Thomas's Hospital.

† Surgeon to and Lecturer on Clinical Surgery at St. Thomas's Hospital; late Assistant Demonstrator of Anatomy. Surgeon to the Magdalen Hospital.



**DIXON (E. L.), Preston, Lancashire.**

1852. 1st Year Student, Scholarship;  
Chemistry, Hon. Cert.  
1853. 2nd Year Student, Scholarship;  
Physiology, Hon. Cert.;  
Materia Medica, Prize;  
Descriptive Anatomy, Hon. Cert.;  
Midwifery, Hon. Cert.;  
Botany, Prize;  
Medicine, Hon. Cert.  
1854. 3rd Year Student, Scholarship;  
Descriptive Anatomy, Hon. Cert.;  
Practical Chemistry, Prize;  
Physiology, Hon. Cert.

**DOBSON (N. C.),\* Holbeach, Lincolnshire.**

1865. 1st Year Student, 1st Coll. Prize.  
1866. 2nd Year Student, 1st Coll. Prize.  
1867. 3rd Year Student, 2nd Coll. Prize;  
A Prize and Hon. Cert. for Pro-  
ficiency in Surgery and Surgical  
Anatomy at the Cheselden  
Medal Examination;  
Treasurer's Gold Medal.

**DRAKE (A. J.), Kingsclere, Hants.**

1870. 3rd Year Student, 1st Coll. Prize.

**DRAKE (C. H.), Kingsclere, Hants.**

1857. 1st Year Student, Hon. Cert.;  
1858. 2nd Year Student, Treasurer's  
1st Prize;  
Clinical Medicine, 2nd Prize.  
1859. 3rd Year Student, Hon. Cert.;  
Surgery and Surgical Anatomy,  
Cheselden Medal;  
General Proficiency, Treasurer's  
Medal.

**DRAKE (T.), Kingsclere, Hants.**

1858. 2nd Year Student, Treasurer's  
1st Prize;  
1859. 2nd Year Student, President's Prize.  
1860. 3rd Year, 1st College Prize;  
Surgery and Surgical Anatomy,  
Cheselden Medal;  
General Proficiency, Treasurer's  
Medal.

**DREW (G. F. A.), Plymouth.**

1848. Descriptive and Surgical Anatomy,  
Prize;  
Chemistry, Hon. Cert.;  
Botany, Prize;  
Comparative Anatomy, Hon. Cert.;  
Practical Chemistry, Prize;  
Gen. Proficiency, Hon. Cert.  
1849. Physiology, 2nd Prize;  
Midwifery, Hon. Cert.;  
Descriptive Anatomy, Hon. Cert.;  
Medicine, Hon. Cert.  
1850. Physiology, Prize;  
Descriptive Anatomy, Hon. Cert.;  
Medicine, Hon. Cert.;  
Surgery, Hon. Cert.

**DUKES (C.), Dalston.**

1865. 1st Year Student, Hon. Cert.  
1867. 3rd Year Student, Hon. Cert.;  
Prosector's Prize and Hon. Cert.

**DUNCAN (W. A.), Manchester.**

- w 1876-7. 1st Year Student, The William  
Tite Scholarship.  
■ 1877. 1st College Prize.  
w 1877-8 2nd Year Student, The Musgrove  
Scholarship.  
w 1877-8. 2nd Year Physical Society's Prize.  
s 1878. 1st College Prize.  
w 1878-9. 2nd Tenure Musgrove Scholarship.  
1st College Prize;  
3rd Year Physical Society's Prize;  
Grainger Testimonial Prize.  
1880. 4th Year Student, The Cheselden  
Medal.  
The Treasurer's Medal.  
w 1881-2. The Solly Medal and Prize.

**DUNMAN (G.), Camberwell.**

1852. Chemistry, Hon. Cert.  
1854. Midwifery, Hon. Cert.

**DYER (F. J.), Blackheath.**

1847. Chemistry, Prize;  
Materia Medica, Hon. Cert.;  
1849. Physiology, Hon. Cert.;  
Midwifery, 2nd Prize;  
Medicine, Hon. Cert.

**EDDOWES (J. H.), Loughboro'.**

1843. Physiology and Anatomy, Hon.  
Cert.;  
Chemistry, Hon. Cert.;  
Comparative Anatomy, Prize.  
1844. Physiology and Anatomy, Hon.  
Cert.;  
Clinical Medical Reports, Silver  
Medal.  
1845. Clinical Medicine, Prize.

**EDDOWES (W. D.), Loughboro'.**

1845. Descriptive and Surgical Anatomy,  
Prize.

**EDMONDS (S.), St. Helen's, Lancashire.**

1852. Chemistry, Hon. Cert.  
1853. Midwifery, Hon. Cert.;  
Medicine, Hon. Cert.;  
Surgery, Hon. Cert.  
1854. Surgery and Surgical Anatomy,  
Hon. Cert.;  
Clinical Medicine, Treas. Prize;  
Clinical Medicine, Pres. Prize.  
1855. Surgical Reports, Pres. Prize;  
Clinical Medicine, Dr. Roots' Prize.

**EDWARDS (S.), Littlehampton.**

1855. Midwifery, Hon. Cert.

**EDWARDS (V.), Woodbridge, Suffolk.**

1843. Surgery, Prize.

**ELBOROUGH (P. J.), Herne Bay.**

1845. Chemistry, Hon. Cert.  
1847. Medicine, Hon. Cert.;  
Midwifery, Prize.  
1848. Medicine, Hon. Cert.;  
Surgery, Hon. Cert.;  
Surgical Report, Pres. Prize.

**ELLIS (J.), Portsea, Hants.**

1857. Clinical Assistant (Medicine), Hon.  
Cert.

**ELWIN (C. J.), London.**

1855. Practical Midwifery, Prize.

**EVANS (C. W. DE LACEY), Bangor.**

- w 1876-7. 3rd Year Student, The Solly Prize  
and Hon. Cert.

\* Surgeon to the Bristol General Hospital  
and Lecturer on Anatomy at the Bristol  
Medical School.

**FAIRBANK (J.), Islington.**

1865. 1st Year Student, Hon. Cert.  
1866. 2nd Year Student, Prosec. Prize.

**FARRANT (S.), Collumpton, Devon.**

1859. 2nd Year Student, Hon. Cert.  
1860. 3rd Year Student, Hon. Cert.

**FAULKNER (R.), Camberwell.**

1844. Botany, Prize;  
Clinical Medical Reports, Hon. Cert.

**FELL (W.), Kensington.**

w 1878-9. 2nd Year Student Prosector Prize.

**FENTON (H. A. H.), Westminster.**

w 1875-6. 1st Entrance Science Scholarship.  
s 1876. 1st Year Student, 1st College Prize.

**FERNIE (A.), Yeldon, Beds.**

1853. Physiology, Hon. Cert.;  
Surgery, Hon. Cert.

**FERNIE (W. T.), Yeldon, Beds.**

1852. Practical Midwifery, Prize;  
Midwifery, Hon. Cert.

**FISHER (T.), St. Michael's.**

s 1872. 1st Year Student, Hon. Cert.  
s 1873. 2nd Year Student, 2nd College Prize.  
w 1874. 2nd Year Student, 3rd College Prize.  
w 1875. 3rd Year Student, Surgery and  
Surgical Anatomy, Prize, and  
Cert. of Hon.

**FORD (G. W.), Cape of Good Hope.**

w. 1880-81. 3rd Year Student, Prosector's  
Prize.

**FOWLER (J. T.), Winterton, Lincoln.**

1854. Chemistry, Hon. Cert.  
1855. Botany, Hon. Cert.

**FOWLER (J.), Winterton, Lincoln.**

1859. 1st Year Student, Hon. Cert.  
1860. 2nd Year Student, 2nd College Prize.  
1861. 3rd Year Student, 2nd College Prize.

**FREEMAN (D.), Kennington.**

1859. Clinical Medicine, Prize.

**FREEMAN (A. J.), Southsea, Hants.**

1865. 3rd Year Student, Hon. Cert.

**FULTON (J. A.), Stockwell.**

1852. Botany, Hon. Cert.  
1853. Practical Chemistry, Prize.

**FURNIVAL (F. H.), Nottingham.**

w 1878-9. 1st Year Student;  
The Sir Wm. Tite Scholarship.

**GARDNER (E. B.), London.**

1858. Matriculation Examination—Clas-  
sics and Mathematics, Prize.

**GARTON (W.), St. Helier's.**

1870. 2nd Year Student, 2nd College Prize.  
Physical Society's 2nd Year's Prize.  
1871. Physical Society's 3rd Year's Prize.

**GIMBLETT (J.), Taunton.**

1860. 1st Year Student, Hon. Cert.

**GEORGE (C. F.), Kirton-on-Lindsay.**

1855. Midwifery, Hon. Cert.  
1856. 2nd Year Student, Dr. Root's Prize.  
1857. 3rd Year Student, Hon. Cert.;  
Surgery and Surgical Anatomy,  
Cheselden Medal.

**GERVIS (F. H.), Tiverton.**

1861. 1st Year Matriculation Scholarship.  
—College Prize, 2nd College  
Prize.

1862. 2nd Year Student, 1st College Prize.

1863. 3rd Year Student, Hon. Cert. and  
Physical Society's Prize.

**GERVIS (H.),\* Tiverton.**

1856. 1st Year Student, Trea. 1st Prize;  
Matriculation Examination, Phy-  
sics, &c., Prize.

1857. 2nd Year Student, Pres. Prize;  
Physical Society's Essay, Prize.

1858. Clinical Assistant (Medicine), 2nd  
Prize;  
Physical Society's Essay, Prize;  
General Proficiency, Treasurer's  
Medal.

**GILES (F. W.), Henley-on-Thames.**

w 1875-6. 3rd Year Student, Hon. Cert.

**GIMLETTE (G. H. D.), Southsea.**

s 1874. 1st Year Student, Hon. Cert.  
w 1875-6. 3rd Year Student, Hon. Cert.  
w 1876-7. Physical Society's 3rd Year's  
Prize.

**GLOVER (J. P.), Lansdowne Road.**

w 1881-2. 3rd Year Student, 3rd Coll. Prize.

**GODDARD (E.), London.**

1860. Matriculation Examination, Clas-  
sics, &c., Prize.

**GODDARD (L.), London.**

1856. Matriculation Examination, Clas-  
sics and Mathematics, Prize.

**GOWLAND (W.), London.**

1845. Botany, Hon. Cert.

**GRABHAM (C.), Islington.**

1857. Matriculation Examination, Modern  
Languages, Prize.

**GRABHAM (G. W.),† Islington.**

1855. Matriculation Examination, Scho-  
larship;  
Midwifery, Hon. Cert.;  
Materia Medica, Hon. Cert.

**GRABHAM (J.), Rochford, Essex.**

1848. Descriptive and Surgical Anatomy,  
Hon. Cert.;  
Chemistry, Hon. Cert.;  
Botany, Hon. Cert.;  
Comparative Anatomy, Prize.  
1850. Physiology, Hon. Cert.  
1851. Physiology, Hon. Cert.;  
Descriptive Anatomy, Hon. Cert.;  
Forensic Medicine, Prize;  
Surgery, Prize;  
Midwifery, Hon. Cert.

**GRABHAM (M. C.), Islington.**

1860. 2nd Year Student, Hon. Cert.  
1861. 3rd Year Student, Hon. Cert.

\* Obstetric Physician to, and Lecturer on  
Midwifery and Diseases of Women and  
Children. Examiner in Obstetric Medicine,  
University of London.

† Resident Medical Superintendent at  
Earlswood Asylum.

**GREAVES (C. A.), Derby.**

1861. 1st Year Student, Treasurer's Prize;  
Matriculation Examination, Hon.  
Cert.

1862. 2nd Year Student, 2nd College Prize;  
Physical Society's Prize.

1863. 3rd Year Student, 1st College Prize;  
Physical Society's Prize;  
Cheselden Medal.

**GREEN (C. D.), New Cross.**

w 1879-80. 1st Year Student, The Wm. Tite  
Scholarship.

s 1880. 3rd College Prize.

w 1880-81. 1st College Prize.

**GREEN (J. T.), Peckham, Surrey.**

1865. 1st Year Student, Physical Society's  
Prize.

**GREEN (M. H.), Peckham.**

s 1873. 1st Year Student, 2nd College Prize.

**GROSE (S.), Boston, Lincoln.**

1858. 2nd Year Student, Hon. Cert.

1859. Physical Society's Essay Prize.

**GRIFFITHS (A. L.), London.**

1859. Midwifery, Hon. Cert.

**GULLIVER (G.), Canterbury.**

w 1876-7. Physical Society's 2nd Year's Prize.

**GURNEY (R. A. F.), Rampton, Cam-  
bridge.**

1851. Practical Midwifery, Prize.

**HAGUE (S.), \* Camberwell.**

1863. 1st Year Student, 2nd Coll. Prize.

**HAIG-BROWN (C. W.), Godalming.**

s 1878. 1st Year Student, 2nd College Prize;  
w 1878-9. 2nd Year Student, 2nd College  
Prize.

w 1880-81. The Cheselden Medal.

**HAMMERTON (E.), Elland, York.**

1857. 1st Year Student, Hon. Cert.

**HAMMOND (J. H.), Bridlington, York.**

1850. Medical Cases, President's Prize.

**HARDING (J. A.), Bath.**

1859. Clinical Medicine, 2nd Prize.

1860. Clinical Assistant (Medicine), 1st  
Prize.

**HARPER (R.), Brighton.**

1844. Clinical Surgical Reports, Hon. Cert.

1845. Physical Society's Essay, Prize.

Dresser's Clinical Surgery, Prize.

**HATCHETT (F. W.), S. Wales.**

s 1880. 1st Year Student, 1st College Prize.

**HATTON (G. S.), Newent, Glo'ster-  
shire.**

w 1876-7. 2nd Year Student, Prosector's  
[Prize.

**HASLAM (W. F.), Reading.**

s 1876. 2nd Year Student, 1st College Prize.

w 1877-8. The Cheselden Medal.

**HEELIS (R.), Carshalton.**

s 1877. 1st Year Student, 2nd College Prize.

s 1878. 2nd Year Student, 2nd Coll. Prize.

**HEWLETT (T. J.), Harrow.**

1850. Matriculation Scholarship, Prize.

**HEYGATE (W. N.), Harslope, Bucks.**

1863. 2nd Year Student, Hon. Cert.

1864. 3rd Year Student, Hon. Cert.

**HICKS (J. W.),† Highgate New  
Town, N.**

1852. 1st Year Student, Treasurer's 1st  
Prize.

1860. 2nd Year Student, 1st College Prize;  
Physical Society's Prize.

1861. 3rd Year Student, 1st College Prize;  
Physical Society's Prize;  
Cheselden Medal;  
Treasurer's Gold Medal.

**HIGGINS (A. H.), Bermondsey.**

1857. Midwifery, Hon. Cert.

**HEIGHTON (T.), Leicester.**

w 1873. 3rd Year Student, Hon. Cert.

**HILDITCH (J.), Sandbach, Cheshire.**

1857. 1st Year Student, Hon. Cert.

1858. Physical Society's Essay, Prize.

1859. Essay on Neuralgia, Mr. N. Smith's  
Prize.

**HODGES (H. B.)**

1855. Midwifery, Hon. Cert.

**HODGES (R.), London.**

1843. Physiology and Anatomy, Hon.  
Cert.;

Medicine, Hon. Cert.;

Clinical Medicine, Hon. Cert.;

Surgical Essay, Silver Medal.

**Ho KAI, Hong Kong, China.**

w 1875-6. 1st Year Student, Hon. Cert.

s 1876. Hon. Cert.

w 1876-7. 2nd Year Student, Hon. Cert.

**HOLBERTON (H. N.), Hampton.**

w 1876-7. 2nd Entrance Science Scholarship,  
and 2nd College Prize.

w 1877-8. 2nd Year Student, 1st Coll. Prize.

**HOPTON (A. W.), Stockwell.**

1851. Descriptive Anatomy, Hon. Cert.

**HOOPER (J. H.), Upton Warren.**

1858. 1st Year Student, Hon. Cert.

1859. 2nd Year Student, College Prize.

1860. 3rd Year Student, Hon. Cert.

**HOWELL (T.), London.**

1850. Practical Midwifery, Prize.

**HUBBARD (J. W.), Leicester.**

1847. Clinical Medical Reports, Prize;

Medicine, Prize;

Physiology and Anatomy, Hon.  
Cert.;

Physical Society's Essay, Trea-  
surer's Prize.

**HULL (W. W.), Acton.**

w 1878-9. 2nd Entrance Science Scholarship

w 1881-2. The Mead Medal.

**HUNT (J. A.), Derby.**

w 1873. 1st Year Student, Hon. Cert.

w 1874. Prosector's Prize.

**HUNTER (W. F.), Margate.**

1859. 1st Year Student, Hon. Cert.;

Matriculation Examination in  
Classics and Mathematics, Prize;

Matriculation Examination in  
Modern Languages, Prize.

1860. 2nd Year Student, 3rd Coll. Prize.

1861. 3rd Year Student, Hon. Cert.

**HURMAN (H. B.), Bridgewater.**

1853. Midwifery, Hon. Cert.

\* Late Medical Registrar at St. Thomas's  
Hospital.

† Late Lecturer on Botany at St. Thomas's  
Hospital; late Curator of the Museum.



**HUTTON (J. S.), Sevenoaks.**  
w 1881-2. Entrance Science Scholarship.  
2nd Coll. Prize.

**ILES (D.), Fairford.**  
1863. 2nd Year Student, Hon. Cert.  
1864. 3rd Year Student, Hon. Cert.

**INGLIS (W. W.),\* Brixton Hill.**  
1864. 1st Year Student, 2nd Coll. Prize.  
1865. 2nd Year Student, 2nd Coll. Prize.  
1866. 3rd Year Student, 3rd Coll. Prize;  
Cheselden Medal.

**IVES (R.)**  
1855. Midwifery, Hon. Cert.

**JACKSON (T. C.), Rotherhithe.**  
1844. Materia Medica, Hon. Cert.

**JACOB (E. H.), Winchester.**  
w 1875-6. Physical Society's 3rd Year's  
Prize.

**JACOBSON (T. E.), Sleaford, Lincoln.**  
1852. Practical Midwifery, Prize.

**JARDINE (J. L.), Brixton.**  
1848. Physiology and Anatomy, Hon.  
Cert.  
1850. Medical Reports, Dr. Roots' Prize.

**JAY (M.), Wallaroo, South Australia.**  
w 1877-8. 1st Year Student, 3rd Coll. Prize.  
w 1878-9. 2nd Year Student, 2nd College  
Prize;  
Prosecutor's Prize.

**JEFFERSON (T. J.), Hull.**  
1861. 2nd Year Student, Hon. Cert.  
1862. 3rd Year Student, Hon. Cert.

**JOHNSON (W. G.), Wandsworth.**  
1853. Chemistry, Hon. Cert.  
1854. Midwifery, Hon. Cert.  
1855. Comparative Anatomy Prize; Mid-  
wifery, Hon. Cert.

**JONES (S.),†Cricklewood, Middlesex.**  
1851. Matriculation Scholarship, Prize;  
Descriptive Anatomy, Hon. Cert.;  
Chemistry, Hon. Cert.;  
1st Year Student, Scholarship.  
1852. 2nd Year Student, Scholarship;  
Physiology, Hon. Cert.;  
Descriptive Anatomy, Prize;  
Botany, Hon. Cert.  
1853. Physiology, Hon. Cert.;  
Descriptive Anatomy, Hon. Cert.;  
3rd Year Student, Scholarship;  
Materia Medica, Hon. Cert.

**JONES (H. Sydney), George Street,  
Hanover Square.**  
w 1881-2. Entrance Science Scholarship.  
The Wm. Tite Scholarship.

**JONES (T.)**  
1855. Midwifery, Hon. Cert.

**JONES (T. M.), Swansea.**  
Surgery, Hon. Cert.;  
Midwifery, Hon. Cert.

**JONES (A. O.), Islington.**  
1862. 1st Year Student, Hon. Cert.

**JONES (J.), Ilfracombe.**  
1863. Matriculation Examination —  
Modern Languages and Modern  
History, College Prize.

**JONES (W. Wansbrough),‡ Leek.**  
w 1877-8. 1st Year Student;  
1st Entrance Science Scholarship;  
£60.

The William Tite Scholarship.  
w 1877-8. 1st Year Physical Society's Prize;  
s 1878. 1st Year Student, 1st Coll. Prize;  
w 1878-9. 2nd Year Student, The College  
Scholarship;

■ 1879. 2nd Year Student, 2nd Coll. Prize;  
w 1879-80. 3rd Year Student, 2nd tenure of  
Coll. Scholarship, and 1st Coll. Prize.  
w 1880-81. The Mead Medal;  
Treasurer's Gold Medal.

**JOSEPH (S. W. J.), St. Leonards.**  
1873. Physical Society's 2nd Year Prize.

**KEELE (J. T.), South Lambeth.**  
1853. Materia Medica, Hon. Cert.;  
Midwifery, Hon. Cert.

**KERAKOOSE (J.), East Indies.**  
1854. Midwifery, Hon. Cert.

**KEYWORTH (J. W.),§ Aston, Berks.**  
1848. Chemistry, Hon. Cert.;  
Materia Medica, Prize;  
General Proficiency, Hon. Cert.  
1849. Physiology, Hon. Cert.;  
Midwifery, 3rd Prize;  
Medicine, Hon. Cert.;  
Physical Society's Essay, Prize.  
1850. Physiology, Hon. Cert.;  
(Accoucheur) Midwifery, Hon. Cert.;  
Ophthalmic Reports, a Governor's  
Prize;  
Essay on Neuralgia, Mr. Newman  
Smith's Prize.  
1851. Comparative Anatomy, Prize;  
Clinical Medicine, Prize;  
Surgical Reports, Prize;  
Midwifery, Prize;  
Medical Reports, Prize;  
Pathology, Prize;  
Physical Society's Essay, Prize.

**KIDD (H. G.), U. Norwood.**  
w 1881-2. 1st Year Student, 3rd Coll. Prize.  
**KNAGGS (R. H. E.), Trinidad, W.  
Indies.**

w 1875-6. Prosecutor's Prize.

**LAKE (W. W.), Ilford, Essex.**  
1873. Physical Society's 1st Year's Prize.

**LAKE (R.), Dover.**  
w 1881-2. Prosecutor's Prize.

**LANKESTER (H.), Poole, Dorset.**  
1850. 1st Year Student, Scholarship;  
Descriptive Anatomy, 1st Prize;  
Chemistry, Prize.  
1851. Physiology, Prize;  
Materia Medica, Prize;  
Descriptive Anatomy, Hon. Cert.;  
Botany, Hon. Cert.;  
Medicine, Prize;  
Physical Society's Essay, Prize;  
Surgery, Hon. Cert.

\* Late Medical Registrar at St. Thomas's  
Hospital.

† Surgeon to, and Joint Lecturer on  
Surgery at, St. Thomas's Hospital; late  
Lecturer on Anatomy and Ophthalmic  
Surgery.

‡ Ratcliffe Travelling Fellowship, Oxford,  
1880.

§ Lecturer on Physiology at Sydenham  
College, Birmingham.



1852. 3rd Year Student, Scholarship;  
Physiology, Hon. Cert.;  
Descriptive Anatomy, Hon. Cert.;  
Medical Cases, President's Prize;  
Medicine, Prize;  
Surgery, Prize;  
Surgery and Surgical Anatomy  
Cheselden Medal;  
General Proficiency, Treasurer's  
Medal.
1853. Surgical Essay, President's Prize.
- LANKESTER (H. H.), Leicester.**  
w. 1880-81, Entrance Science Scholarship.  
1st Year Student 2nd Coll.  
Prize.  
w 18<sup>o</sup>1-2. 2nd Year Student, The College  
Scholarship.
- LAVER (H.)**  
1855. Midwifery, Hon. Cert.
- LAVER (A. H.), Rayleigh.**  
1870. 1st Year Student, 3rd Coll. Prize.  
1871. 2nd Year Student, 2nd Coll. Prize.  
w 1872. 3rd Year Student, 2nd Coll. Prize,  
Cheselden Medal.
- LAWSON (R.), Wintham, N.B.**  
w 1880-81. 1st Entrance Science Scholarship.  
1st Year Student, The Wm. Tite  
Scholarship.  
s 1881. 2nd Coll. Prize.  
w 1881-2. 2nd Year, 2nd Coll. Prize.
- LAXTON (T. L.), Stamford.**  
w 1876-7. 2nd Year Student, Prosector's  
Prize.
- LEDGER (M.), London.**  
1845. Dresser's Clinical Surgery, Prize.
- LEES (J.),\* Wolverhampton.**  
1859. 1st Year Student, Hon. Cert.;  
3rd Year Student, Hon. Cert.;  
Physical Society's Prize.
- LEESON (T.), Snaith, York.**  
1847. Medicine, Hon. Cert.;  
Surgery, Prize;  
Physiology and Anatomy, Hon.  
Cert.;  
Descriptive and Surgical Anatomy,  
Hon. Cert.;  
Midwifery, Hon. Cert.  
1848. Descriptive and Surgical Anatomy,  
Hon. Cert.;  
Physiology and Anatomy, Hon.  
Cert.;  
Medicine, Hon. Cert.;  
Midwifery, Prize.
- LE GROS (J.), Jersey.**  
1844. Medicine, Hon. Cert.;  
Midwifery, 1st Prize.  
1845. Clinical Medical Reports, Medal;  
Medicine, Hon. Cert.;  
Dresser's Clinical Surgery, Prize.
- LEREW (F. W.), Maida Vale.**  
s 1876. 1st Year Student, Hon. Cert.
- LITTELJOHN (S. G.), Falmouth,  
Jamaica.**  
1865. 1st Year Student, Hon. Cert.

\* Late Demonstrator of Morbid Anatomy  
at St. Thomas's Hospital.

- LOCOCK (H. S.), Blackheath.**  
1848. Descriptive and Surgical Anatomy,  
Hon. Cert.;  
Physiology and Anatomy, Hon.  
Cert.;  
Midwifery, Hon. Cert.  
1849. Physiology, Hon. Cert.
- LONGSTAFF (G. B.), Wandsworth.**  
w 1873-4. 1st Year Student, 2nd Coll. Prize.  
s 1874. 1st Coll. Prize;  
Physical Society's 1st Year's Prize;  
■ 1875. 2nd Year Student, 2nd Coll. Prize.  
w 1875-6. 3rd Year Student, 1st Coll. Prize.  
w 1876-7. 4th Year Student, Mead Medal.
- LUSH (W. H.), Devizes.**  
w 1872. 2nd Year Student, Prosector's  
Prize.
- LUSH (J. S.), West Lavington.**  
s 1873. 1st Year Student, 3rd Coll. Prize.
- MACMURDO (H. H.), New Broad  
Street.**  
1847. Chemistry, Hon. Cert.  
1849. Midwifery, Hon. Cert.
- MANBY (W. G.), Barking, Essex.**  
1851. Descriptive Anatomy, Hon. Cert.
- MARCH (H. C.), Newbury.**  
1868. 1st Year Student, Treasurer's 2nd  
Prize.  
1856. 2nd Year Student, Hon. Cert.  
1860. 3rd Year Student, Hon. Cert.
- MASON (M. T.), Newington.**  
1845. Practical Midwifery, Hon. Cert.
- MAYBURY (A. C.), Frimley, Surrey.**  
1865. 3rd Year Student, Hon. Cert.
- MAYBURY (W. A.), Frimley, Surrey.**  
1867. 1st Year Student, 3rd College Prize.
- MAYBURY (H. M.), Frimley, Surrey.**  
1869. 1st Year Student, 2nd Coll. Prize;  
1871. 3rd Year Student, 3rd Coll. Prize.
- MAYBURY (A. V.), Frimley.**  
1870. 1st Year Student, 2nd Coll. Prize.  
1871. 2nd Year Student, 1st Coll. Prize.  
w 1872. 3rd Year Student, 1st Coll. Prize;  
Treasurer's Gold Medal.
- MAYNARD (J. C. M.)**  
1855. Midwifery, Hon. Cert.
- MEADOWS (H.), Leicester.**  
1867. 1st Year Student, The William  
Tite Scholarship;  
Phys. Soc. 1st Year's Prize.  
1868. 2nd Year, Tite Scholarship;  
Phys. Soc. 2nd Year's Prize.
- MILLER (B.), London.**  
1845. Midwifery, Hon. Cert.;  
Practical Midwifery, Prize;  
Clinical Medicine, Prize.
- MILNE (C. W.), Aberdeen.**  
1865. 1st Year Student, Hon. Cert.
- MITCHELL (J.), Leicester.**  
1866. 1st Year Student, 2nd Coll. Prize;  
Phys. Society's 1st Year's Prize.  
1867. 2nd Year Student, 2nd Coll. Prize.  
1868. 3rd Year Student, 2nd Coll. Prize.

**MONEY (F. J.), Offham, Kent.**

1849. Descriptive Anatomy, 2nd Prize;  
Chemistry, Prize;  
Materia Medica, 1st Prize;  
Matriculation Scholarship, Prize;  
1st Year Student Scholarship.  
1850. Physiology, Prize;  
Comparative Anatomy, Prize;  
Descriptive Anatomy, Prize;  
Medicine, Prize;  
Surgery, Hon. Cert.  
1851. Descriptive Anatomy, Hon. Cert.;  
Midwifery, Prize;  
Medicine, Prize;  
Physical Society's Essay, Prize;  
Surgery, Prize;  
Surgery and Surgical Anatomy,  
Cheselden Medal;  
General Proficiency, Treasurer's  
Gold Medal.

**MORETON (J. E.), Marton, Cheshire.**

1850. 1st Year Student, Scholarship;  
Descriptive Anatomy, Hon. Cert.;  
Chemistry, Hon. Cert.  
1851. Materia Medica, Hon. Cert.;  
Botany, Hon. Cert.;  
1852. Physiology, Prize;  
Descriptive Anatomy, Prize;  
Physical Society's Essay, Prize;  
Medicine, Prize;  
Surgery, Prize;  
2nd Year Student, Scholarship.  
1853. 3rd Year Student, Scholarship;  
Physiology, Prize;  
Clinical Medicine, Pres. Prize;  
Clinical Medicine, Treas. Prize.  
Clinical Medicine, Mr. N. Smith's  
Prize;  
Descriptive Anatomy, Hon. Cert.;  
Midwifery, Hon. Cert.;  
Ophthalmic Surgery, Prize;  
Medicine, Prize;  
Forensic Medicine, Hon. Cert.;  
Surgery, Hon. Cert.;  
Surgery and Surgical Anatomy  
Cheselden Medal;  
Gen. Proficiency, Treas. Medal.  
1854. Clinical Med., Dr. Roots' Prize;  
Pathology, Hon. Cert.

**MORETON (T.), Marton, Cheshire.**

1867. 1st Year Student, Treasurer's 2nd  
Prize;  
Matriculation Examination, Clas-  
sics and Mathematics, Prize.  
1858. Clinical Medicine, Prize.  
1859. 3rd Year Student, Hon. Cert.;  
Clinical Medicine, Hon. Cert.

**MORGAN (S.), London.**

1852. Descriptive Anatomy, Hon. Cert.  
1853. Midwifery, Hon. Cert.  
1854. Midwifery, Hon. Cert.;  
Forensic Medicine, 2nd Prize.

**MORRIS (C. K.), Spalding, Lincoln-  
shire.**

w 1875. Prosecutor's Prize.

**MORTON (J.), Holbeach, Lincoln.**

1861. 1st Year Student, Hon. Cert.  
1862. 2nd Year Student, Hon. Cert.  
1863. 3rd Year Student, Hon. Cert.

**MOXON (H. M.), Brigsham.**

1871. Prosecutor's Prize.

**MUSSON (W. E.), Birkholme, Lin-  
coln.**

1850. Matriculation Scholarship, Prize;  
Descriptive Anatomy, Hon. Cert.  
1851. Physiology, Hon. Cert.;  
Comparative Anatomy, Hon. Cert.;  
Medicine, Hon. Cert.

**NEWBY (C. H.), London.**

1870. Prosecutor's Prize.

**NEWSHOLME (A.), Bradford.**

- w 1875-6. 1st Year Student, 1st Coll. Prize.  
w 1876-7. 2nd Year Student, 1st College  
Scholarship.  
s 1877. Ditto 1st Coll. Prize.  
w 1877-8. 3rd Year Student, The "College  
Scholarship," 1st Coll. Prize.

**NEWTN (A. H.), Kennington,  
Surrey.**

1865. 1st Year Student, Hon. Cert.

**NICHOL (R.), Camberwell.**

1844. Chemistry, 1st Prize;  
Materia Medica, Prize.  
1845. Physiology and Anatomy, Hon.  
Cert.;  
Botany, Prize;  
Comparative Anatomy, Prize.

**NICHOLSON (F. W.), Putney.**

- s 1877. 1st Year Student, 3rd Coll. Prize.  
w 1877-8. 2nd Year Student, Prosecutor's  
Prize.

**NICHOLSON (J. F.), Brigg, Lincoln.**

- w 1873. 1st Year Student, 1st Coll. Prize.  
s 1873. Ditto 1st Coll. Prize.  
w 1874. 2nd Year Student, 1st Coll. Prize.  
s 1874. Ditto 1st Coll. Prize.  
w 1875. 3rd Year Student, 1st Coll. Prize;  
Cheselden Medal;  
Mead Medal;  
Treasurer's Gold Medal.

**O'CALLAGHAN (C.), Killarney.**

1847. Chemistry, Hon. Cert.;  
Materia Medica, Prize.  
1848. Medical Reports, President's Prize;  
Physiology and Anatomy, Hon.  
Cert.;  
Midwifery, Hon. Cert.;  
Practical Midwifery, Prize;  
Forensic Medicine, Prize;  
Physical Society's Essay, Prize.  
1849. Physical Society's Essay, Treas-  
urer's Prize;  
Resident Accoucheur's Report,  
Prize.

**ORANGE (W.),\* Torquay.**

1854. Midwifery, Hon. Cert.  
1856. Midwifery, Hon. Cert.

**ORD (G. R.), Brixton.**

1858. Midwifery, Hon. Cert.

**ORD (W. M.),† Brixton.**

1853. Matriculation Examination,  
Scholarship;  
1st Year Student, Scholarship;  
Descriptive Anatomy, Prize;  
Chemistry, Prize.

\* Resident Medical Superintendent at  
Broadmoor Asylum.

† Physician to, and Joint Lecturer on  
Medicine, late a Lecturer on Physiology  
and Practical Physiology at St. Thomas's  
Hospital. Late Lecturer on Comparative  
Anatomy.

1854. 2nd Year Student, Scholarship;  
Medicine, Prize;  
Materia Medica, Prize;  
Descriptive Anatomy, Hon. Cert.;  
Midwifery, Hon. Cert.;  
Surgery, Hon. Cert.;  
Physiology, Prize.
1855. 3rd Year Student, Scholarship;  
Surgery and Surgical Anatomy,  
Cheselden Medal;  
Forensic Medicine, Prize;  
Pathology, Prize;  
Practical Chemistry, Prize;  
Medicine, Hon. Cert.;  
Descriptive Anatomy, Hon. Cert.;  
Physiology, Prize;  
General Proficiency, Treasurer's  
Medal.
1856. Registrar, Prize.
- OSBORN (S.), Brixton.**  
1870. Physical Society's 2nd Year's Prize.
- OUGHTON (T.), London.**  
1858. Clinical Medical Assistant, 1st Prize.
- OZANNE (C. H.), Guernsey.**  
1844. Descriptive and Surgical Anatomy,  
Prize.
- OZANNE (J.), Guernsey.**  
1843. Physiology and Anatomy, Chesel-  
den Medal;  
Comparative Anatomy, Hon. Cert.
1844. Medicine, Prize;  
Midwifery, 2nd Prize;  
Surgery, Hon. Cert.;  
Physical Society's Essay, Prize;  
Clinical Surgical Reports, Silver  
Medal.
- PAGE (W. H.), Cheltenham.**  
s 1872. 1st Year Student, Hon. Cert.  
w 1873. 3rd Coll. Prize.
- PALMER (M. H. C.), Newbury,  
Berks.**  
1870. Physical Society's 2nd Year's Prize.  
1872. Physical Society's 3rd Year's Prize.
- PEARCE (G.), Salisbury.**  
1860. 1st Year Student, 2nd Coll. Prize.  
1861. 2nd Year Student, 2nd Coll. Prize.
- PEEK (F. H.), Diss, Norfolk.**  
s 1872. 1st Year Student, 1st Coll. Prize.  
w 1873. The William Tite Scholarship.  
w 1874. 2nd Year Wm. Tite Scholarship.
- PENBERTHY (J.), Redruth.**  
1854. 1st Year Student, Scholarship;  
Descriptive Anatomy, Prize;  
Chemistry, Hon. Cert.
1855. 2nd Year Student, Scholarship;  
Midwifery, Hon. Cert.;  
Botany, Prize;  
Descriptive Anatomy, Hon. Cert.
- PERN (A.), Winchester, Hampshire.**  
1865. 1st Year Student, Hon. Cert.
- PHILLIPS (G. G.), Newcastle Emlyn.**  
1859. 2nd Year Student, Hon. Cert.  
1860. 3rd Year Student, 3rd Coll. Prize.
- PICKFORD (J. K.), Brixton.**  
w 1872. 1st Year Student, 3rd Coll. Prize.  
s 1872. Hon. Cert.
- PIKE (W. R.), Leicester.**  
1868. Physical Society's 1st Year's Prize.
- PIKE (J. B.), Leicester.**  
w 1872. 2nd Year Student, Hon. Cert.  
w 1873. 3rd Year Student, Hon. Cert.
- PLOWMAN (R.), Bridgewater, Somst.**  
1862. 1st Year Student, Hon. Cert.  
1863. 2nd Year Student, Hon. Cert.  
1865. 3rd Year Student, Hon. Cert.
- POLLARD (F.), Taunton, Somerset.**  
1865. 1st Year Student, 2nd Coll. Prize.  
1866. 2nd Year Student, 2nd Coll. Prize;  
Physical Society's 2nd Year's Prize.  
1868. 3rd Year Student, 1st Coll. Prize;  
Physical Society's 3rd Year's Prize;  
Cheselden Medal.
- POTTER (H. P.), Denmark Hill.**  
w 1872. 1st Year Student, Hon. Cert.  
s 1872. 3rd College Prize.  
w 1873. 2nd Year Student, 2nd Coll. Prize;  
Prosecutor's Prize.  
w 1874. 3rd Year Student, 1st Coll. Prize;  
Cheselden Medal;  
Hon. Cert. for Gen. Proficiency.  
1875. Grainger Testimonial Prize.
- POYNTER (G. F.), Clapham.**  
1872. Phys. Society's 1st Year's Prize.  
1874. Phys. Society's 3rd Year's Prize.
- PURKISS (A.), Kennington.**  
w 1875-6. 1st Year Student, Hon. Cert.  
s 1876. Hon. Cert.
- PURVIS (J. P.), Blackheath.**  
1861. 1st Year's Student, Hon. Cert.;  
Matriculation Examination, Hon.  
Cert.
1862. 2nd Year Student, Hon. Cert.  
1863. 3rd Year Student, Hon. Cert.
- RAINBOW (F.), Lower Norwood.**  
1864. 1st Year Student, Hon. Cert.  
1865. 2nd Year Student, 3rd Coll. Prize.  
1866. 3rd Year Student, 2nd Coll. Prize.
- RELTON (B.), Ealing.**  
1880. 2nd Entrance Science Scholarship.
- RAYNER (H.),\* Hythe, Kent.**  
1862. Matriculation Examination—Physics  
and Natural History, Hon. Cert.;  
1st Year Student, 1st Coll. Prize.  
1863. 2nd Year Student, 1st Coll. Prize.  
1864. 3rd Year Student, Hon. Cert.;  
Hon. Cert. for the Cheselden Medal.
- RICHARDSON (C. S.), Greenwich.**  
1851. Surgery, Hon. Cert.  
1852. Midwifery, Prize.
- RICHARDSON (L.), Greenwich.**  
1848. General Pathology, Prize.
- RIDGE (J. J.), Horsleydown.**  
1864. 1st Year Student, The William  
Tite Scholarship.  
1865. 2nd Year of Tite's Scholarship;  
Physical Society's 2nd Year's Prize;  
Prosecutor's Prize.  
1866. The Grainger Testimonial Prize.  
1868. 3rd Year Tite Scholarship;  
Hon. Cert. for Proficiency in  
Surgery and Surgical Anatomy;  
Treasurer's Gold Medal.

\* Medical Superintendent Hanwell Asy-  
lum, and Lecturer on Psychology at St.  
Thomas's Hospital. Late Lecturer on  
Psychology at Middlesex Hospital.



**ROBINSON (H. B.), L. Norwood.**

s 1881. 2nd Year Student, 1st Coll. Prize.

**ROE (A. D.), Eccles.**

w 1880-81. 3rd Year Student, 2nd Coll. Prize.

**ROGERS (R. S.), Greenwich.**

1843. Midwifery, First Prize;  
Clinical Medicine, Hon. Cert.

**ROSSITER (G. F.), Taunton.**

1871. 1st Year Student, 1st Coll. Prize.

w 1872. 2nd Year Student, 2nd Coll. Prize.

s 1872. 1st Coll. Prize.

w 1873. 3rd Year Student, 3rd Coll. Prize;

Cheselden Medal;  
Treasurer's Gold Medal.

**ROUSE (R. E.), Woodbridge.**

s 1880. 2nd Year Student, 3rd College Prize.

**RUDALL (J. T.), Crediton, Devon.**

1853. Physiology, Hon. Cert.;  
Midwifery, Hon. Cert.;  
Medicine, Hon. Cert.;  
Surgery, Hon. Cert.

**SANDFORD (H. C.), Brixton.**

w 1872. 1st Year Student, 1st Coll. Prize.

s 1872. 2nd College Prize.

w 1873. 2nd Year Student, 1st Coll. Prize.

s 1873. 3rd College Prize.

w 1874. 3rd Year Student, 2nd Coll. Prize;

Treasurer's Gold Medal.

**SANEYOSHI (Y.), Tokio, Japan.**

w 1881-2. 3rd Year Student, 1st. Coll. Prize.

**SANKEY (G. G.), Ashford, Kent.**

1864. 3rd Year Student, 3rd Coll. Prize.

**SAUNDERS (G. M. C.), London.**

1843. Midwifery, Hon. Cert.

**SAUNDERS (H. W.), London.**

1867. 1st Year Student, 2nd Coll. Prize.

1868. Prosector's Prize.

1869. 3rd Year Student, 1st. Coll. Prize;

Treasurer's Gold Medal;  
Physical Society's 3rd Year's Prize.

**SAUNDERS (W. S.), Camden Town.**

1844. Midwifery, Hon. Cert.

1845. Medicine, Prize;  
Midwifery, Prize;  
Clinical Medicine, Prize.

**SAVILL (T. D.), Brixton.**

w 1875-6. 2nd Entrance Science Scholarship;

1st Year Student, The William  
Tite Scholarship.

s 1876. 3rd College Prize.

w 1876-7. 2nd Year Student, Hon. Cert.

s 1877. 2nd Year Student, 2nd Coll. Prize.

**SCOTT (R. J.), Omagh, Tyrone.**

1861. 1st Year Student, Hon. Cert.

**SEWELL (E.), Little Oakley.**

1848. Physiology and Anatomy, Hon.  
Cert.

**SEDGWICK (J.), Boroughbridge.**

1854. Descriptive Anatomy, Hon. Cert.

1865. Surgery, Hon. Cert.;  
Midwifery, Hon. Cert.

**SEDGWICK (L. W.), Boroughbridge.**

1848. Descriptive and Surgical Anatomy,  
Prize;

Physiology and Anatomy, Prize;

Medicine, Hon. Cert.;

Midwifery Prize;

Surgery, Prize;

1849. Physiology, 1st Prize;

Midwifery, 1st Prize;

Surgery, Prize;

Medicine, 1st Prize;

General Proficiency, Treasurer's  
Medal.

**SERGEANT (E.), Preston.**

1870. 3rd Year Student, 3rd Coll. Prize;  
Cheselden Medal.

**SHARKEY (S. J.),\* Galway.**

1874. Physical Society's 2nd Year's Prize.

**SHAW (J.), Clapham Road.**

w 1874-5. 1st Year Student, 1st Coll. Prize.

s 1875. 1st Coll. Prize.

w 1875-6. 2nd Year Student, 1st Coll. Prize.

**SHEA (H. G.), London.**

1860. 1st Year Student, Hon. Cert.

1861. 2nd Year Student, Hon. Cert.

1862. 3rd Year Student, 2nd Coll. Prize.

**SHEA (J.), London.**

1855. Midwifery, Hon. Cert.

1859. Midwifery, Hon. Cert.

**SHEPPARD (C. E.),† Kensington.**

w 1873-4. 1st Year Student, 1st Coll. Prize.

s 1874. 1st Year Student, 2nd Coll. Prize.

w 1874-5. 2nd Year Student, 1st Coll. Prize.

s 1875. 1st Coll. Prize.

w 1875-6. 3rd Year Student, 2nd Coll. Prize;

Physical Society's 2nd Year's Prize.

w 1876-7. 4th Year Student, the Treasurer's  
Gold Medal.

w 1877-8. Solly Medal and Prize, £20.  
Paper published in Hosp.  
Reports, Vol. VIII.

**SHEPPARD (W. J.), Kensington.**

w 1880-81. 3rd Year Student, 3rd Coll.  
Prize.

w 1881-2. The Treasurer's Gold Medal.

**SIDDAIL (J. B.),‡ Morton, Derby.**

1862. 1st Year Student, Hon. Cert.

1863. 2nd Year Student, Hon. Cert.

1864. 3rd Year Student, Hon. Cert.;

Hon. Cert. for the Cheselden Medal.

**SIMON (M. F.), Blackheath.**

1866. 1st Year Student, 1st Coll. Prize.

1869. 3rd Year Student, 3rd Coll. Prize;

Prosector's Prize;

Prize and Hon. Cert. for Surgery  
and Surgical Anatomy.

**SIMMONS (H. B. M.), West Indies.**

1849. Descriptive Anatomy, Hon. Cert.

**SIMS (G. S.), Derby.**

s 1881. 1st Year Student, 3rd Coll. Prize.

**SISSONS (W. H.), Hull.**

1858. Matriculation Examination—  
Physics, &c., Prize.

1859. 2nd Year Student, Hon. Cert.;

Clinical Medicine, Prize;

Physical Society's Essay, Prize.

1860. 3rd Year Student, 2nd Coll. Prize;

Physical Society's Prize.

\* Assist.-Physician to and Joint Lecturer  
on Pathological Anatomy at St. Thomas's  
Hospital.

† Resident Assistant-Physician to St.  
Thomas's Hospital.

‡ Late Physician to H.B.M. Legation,  
Japan.



**SLATER (J. S.), Bath.**

1868. 1st Year Student, 1st Coll. Prize.  
 1869. Physical Society's 2nd Year's Prize.  
 1870. 3rd Year Student, 2nd Coll. Prize;  
 Treasurer's Gold Medal.

**SLAUGHTER (C. H.), Farningham.**

1855. Midwifery, Hon. Cert.

**SLAUGHTER (G. M.), Farningham.**

1854. Midwifery, Hon. Cert.

**SKINNER (W.), Stockton-on-Tees.**

1848. Botany, Hon. Cert.;  
 Materia Medica, Hon. Cert.

**SKIPPER (J.), Dalston, London.**

1852. Midwifery, Hon. Cert.

**SKIPTON (S. S.), East Indies.**

1851. Midwifery, Hon. Cert.

**SMITH (H. U.), Reading.**

- w 1876-7. 4th Year Student, Cheselden Medal.

**SMITH (R. P.), Belvedere.**

- s 1876. 2nd Year Student, 2nd College Prize.

**SNAITH (F.), Boston, Lincolnshire.**

1864. 3rd Year Student, Hon. Cert.

**SPRAKELING (R. J.), Canterbury.**

1855. Midwifery, Hon. Cert.  
 1856. 2nd Year Student, Hon. Cert.;  
 Clinical Medicine, Prize.

**STADDON (J. H.), London.**

1853. Clinical Medicine, Prize.  
 1859. Clinical Medicine, Prize.

**STEPHENS (J. N.), Walton-on-Thames.**

- w 1876-7. Physical Society's 1st Year's Prize.

**STEPHENS (S. Sanders), Taunton.**

1863. Physical Society's 2nd Year's Prize.

**STODDART (F. W.), Bristol.**

- w 1877-8. 1st Year Student, 1st Coll. Prize.

**STONE (W. H.),\* London.**

1854. Matriculation Examination—  
 Scholarship;  
 1st Year Student, Scholarship;  
 Descriptive Anatomy, Hon. Cert.;  
 Botany, Prize;  
 Chemistry, Prize.  
 1855. 2nd Year Student, Scholarship;  
 Forensic Medicine, Prize;  
 Physical Society's Essay, Prize;  
 Practical Chemistry, Prize;  
 Medicine, Prize;  
 Descriptive Anatomy, Hon. Cert.;  
 Materia Medica, Prize;  
 Physiology, Prize;  
 Clinical Medicine, Mr. N. Smith's  
 Prize.  
 1856. Clinical Medical Prize;  
 General Proficiency, Treasurer's  
 Medal.

\* Physician to, and Lecturer on Physics and Natural Philosophy, and on Materia Medica at St. Thomas's Hospital; late Assistant-Physician to the Hospital for Consumption and Diseases of the Chest, Brompton.

**SUMMERHAYES (H.), Crewkerne, Somersetshire.**

1861. Matriculation Examination—  
 Classics and Mathematics,  
 President's Prize;  
 Modern Languages, &c., College  
 Prize;  
 Physics and Natural History,  
 College Prize;  
 The William Tite Scholarship.  
 1862. 2nd Year Tite's Scholarship.  
 1863. 3rd Year Tite's Scholarship;  
 Treasurer's Gold Medal.

**SUMMERHAYES (W.), Crewkerne, Somersetshire.**

1856. Matriculation Examination—Clas-  
 sics and Mathematics, Hon.  
 Cert.;  
 Matriculation Examination—  
 Modern Languages, Prize.

**SUTCLIFF (E.), Camberwell.**

1861. 1st Year, 3rd College Prize;  
 Matriculation Examination—Hon.  
 Cert.  
 1863. 3rd Year Student, 3rd Coll. Prize.

**SUTCLIFFE (J.), Ashton-under-Lyne.**

1869. Prosecutor's Prize.

**SWALLOW (J. D.), Reading.**

1861. 2nd Year Student, Hon. Cert.

**SWEETING (R. B.), Reading.**

1853. 1st Year Student, Scholarship;  
 Descriptive Anatomy, Hon. Cert.;  
 Chemistry, Hon. Cert.  
 1854. 2nd Year Student, Scholarship;  
 Midwifery, Prize.  
 1855. 3rd Year Student, Scholarship;  
 Midwifery, Hon. Cert.;  
 Clinical Medicine, Treasurer's  
 Prize.

**SWEETING (T.), Reading.**

1855. Midwifery, Hon. Cert.

**TAKAKI (Kanehiro), Kasumigaseki, Tokei, Japan.**

- w 1875-6. 1st Year Student, 3rd Coll. Prize.  
 s 1876. 2nd College Prize.  
 w 1876-7. 2nd Yr. Student, 1st Coll. Prize.  
 s 1877. 2nd Year Student, 3rd Coll. Prize.  
 w 1877-8. 3rd Year Student, 2nd Coll. Prize.  
 w 1878-9. 4th Year Student;  
 "The Cheselden Medal;"  
 The Treasurer's Gold Medal.

**TALBOT (G. T.), Kidderminster.**

1848. Medical Reports, Dr. Roots' Prize.

**TAYLOR (C. M.), Wrawby, Brigg.**

1871. 1st Year Student, 2nd Coll. Prize.  
 w 1872. 2nd Year Student, 1st Coll. Prize.  
 w 1873. 3rd Year Student, 1st Coll. Prize;  
 Surgery and Surgical Anatomy,  
 Hon. Cert.

**TAYLOR (S.), Burton-on-Trent.**

- w 1872. 3rd Year Student, Hon. Cert.

**TAYLOR (S. J.), Grantham.**

- s 1875. 1st Year Student, Hon. Cert.  
 w 1875-6. 2nd Year Student, The Musgrove  
 Scholarship.  
 w 1876-7. 3rd Year Student, 2nd Year  
 Musgrove Scholarship, and 1st  
 College Prize.  
 w 1877-8. The Mead Medal;  
 The Treasurer's Gold Medal.

**TEANBY (F. W.), Turnham Green.**

1851. Practical Midwifery, Prize.  
1852. Clinical Medicine, Junior Prize;  
Midwifery, Hon. Cert.

**THOMAS (L. M.), Camberwell.**

1866. 1st Year Student, 3rd Coll. Prize.  
1867. 2nd Year Student, 3rd Coll. Prize.  
1869. 3rd Year Student, 2nd Coll. Prize;  
Cheselden Medal.

**THOMAS (W. L.), Neath, Glamorgan.**

1845. Chemistry, Prize;  
Materia Medica, Prize.  
1847. Medicine, Hon. Cert.;  
Physiology and Anatomy, Prize;  
Physical Society's Essay, Prize.

**THOMPSON (F. H.), Tenbury.**

1870. Prosector's Prize.

**THURICHUM (G. D.), Kensington.**

- w 1878-9. Physical Society's 2nd Year's  
Prize.

**TIMOTHY (P. V.), London.**

1851. Practical Midwifery, Prize;  
Midwifery, Hon. Cert.

**TODD (A. J. M.), Gravesend.**

- w 1863. 1st Year Student, 2nd Coll. Prize.  
w 1864. Prosector's Prize.

**TOMSON (K.), Luton, Beds.**

1842. Materia Medica Prize.  
1843. Medicine, Prize;  
Clinical Medicine, Hon. Cert.

**TOMSON (W. B.), Luton, Beds.**

- w 1879-80. 1st Year Student, 2nd Coll. Prize.  
s 1880. 1st Year Student, 2nd Coll. Prize.  
w 1880-81. 2nd Year Student, The Mus-  
grove Scholarship, Prosector's  
Prize.  
w 1881-2. 3rd Year Student, 2nd Coll. Prize;  
2nd Tenure of Musgrove  
Scholarship.

**TREND (H. G.), Bridgewater.**

1853. Practical Midwifery, Prize;  
Midwifery, Hon. Cert.  
1854. Midwifery, Hon. Cert.;  
Clinical Medicine, Treasurer's  
Prize.

**TREVES (W. K.), Dorchester.**

1863. Matriculation Examination—  
Physics and Natural History,  
Hon. Cert.; and  
Modern Languages and Modern  
History, College Prize and Hon.  
Cert.;  
1st Year Student, Hon. Cert.  
1865. 3rd Year Student, 2nd Coll. Prize;  
Prosector's Prize.

**TYRREL (W.), Richmond.**

1851. Descriptive Anatomy, Hon. Cert.  
1852. Medicine, Hon. Cert.;  
Surgery, Hon. Cert.  
1853. Forensic Medicine, Hon. Cert.;  
Ophthalmic Essay, Mr. Dixon's  
Prize.  
1854. Surgical Reports, President's Prize.

**VARDY (J. L.), London.**

1854. Midwifery, Hon. Cert.  
1855. Practical Midwifery, Prize.

**VERDON (H. W.), Eccles.**

- 3rd Year Student, Hon. Cert.

**WAGSTAFFE (W. W.),\* Kennington.**

1862. Matriculation Examination—Clas-  
sics and Mathematics, President's  
Prize.  
Physics and Natural History,  
College Prize;  
Modern Languages, &c., College  
Prize;  
1st Year Student, Treasurer's  
Prize;  
1863. 2nd Year Student, 1st Coll. Prize.  
1864. 3rd Year Student, 1st Coll. Prize;  
Physical Society's 3rd Year's Prize;  
Cheselden Medal;  
Treasurer's Gold Medal.

**WALLER (A.), Islington.**

1864. 1st Year Student, 1st Coll. Prize.  
1865. 2nd Year Student, 1st Coll. Prize.  
1866. 3rd Year Student, 1st Coll. Prize;  
Physical Society's 3rd Year's  
Prize;  
Treasurer's Gold Medal.

**WALLER (C. B.), London.**

1860. 2nd Year Student, Hon. Cert.

**WALKER (R.), Kendal.**

1854. Descriptive Anatomy, Hon. Cert.;  
Midwifery, Hon. Cert.  
1855. Midwifery, Hon. Cert.

**WARD (F. H.),† Scarboro'.**

1863. 1st Year Student, Treas. Prize.  
1864. 2nd Year Student, 1st Coll. Prize;  
Physical Soc. 2nd Year's Prize.  
1865. 3rd Year Student, 1st Coll. Prize;  
Physical Soc. 3rd Year's Prize;  
Cheselden Medal;  
Treasurer's Gold Medal.

**WATSON (F.), Nottingham.**

1859. 1st Year Student, Hon. Cert.;  
Matriculation Examination—  
Physics, &c., Prize.

**WAY (F. W.), Fratton, Portsmouth.**

1853. Descriptive Anatomy, Hon. Cert.;  
Chemistry, Hon. Cert.;  
1854. Midwifery, Hon. Cert.;  
Surgery, Hon. Cert.

**WAY (J. P.), Portsmouth.**

1861. 1st Year, Hon. Cert.

**WEBBER (W. W.), Crewkerne.**

- w 1876-7. 1st Year Student, 3rd Coll. Prize.

**WEBSTER (H.), Dulwich.**

1851. Matriculation Sch., Hon. Cert.;  
Descriptive Anatomy, Hon. Cert.  
1852. Botany, Hon. Cert.  
1853. Midwifery, Hon. Cert.

**WEEKES (F. H.), Southampton.**

- w 1873-4. 1st Year Student, 3rd Coll. Prize.  
s 1874. 3rd Coll. Prize.  
w 1874-5. 2nd Year Student, 2nd Coll. Prize.  
s 1875. 3rd Coll. Prize.  
w 1875-6. 3rd Year Student, 3rd Coll. Prize.

**WELLS (A. E.), Brixton.**

- w 1877-8. 1st Year Student, 2nd Entrance  
Science Scholarship.

\* Assistant Surgeon to, and late Joint Lec-  
turer on Anatomy at, St. Thomas's Hospital.  
Late Assistant Demonstrator of Anatomy  
and Surgical Registrar.

† Assistant Medical Officer, Wandsworth  
Lunatic Asylum.

**WEST (J. F.)\***

- 1853. Midwifery, Hon. Cert.
- 1854. Forensic Medicine, Hon. Cert.; Pathology, Hon. Cert.
- 1855. Ophthalmic Reports, Prize.

**WHEATON (F. D. W.), Honiton.**

- 1845. Practical Midwifery, Hon. Cert.

**WILES (J.), Hitchin, Herts.**

- 1850. Physiology, Hon. Cert.
- 1851. (Accoucheur) Midwifery, Prize.

**WHITEHEAD (J.), Preston.**

- 1861. 1st Year, Hon. Cert.
- 1862. 2nd Year Student, 3rd Coll. Prize.
- 1863. 3rd Year Student, 2nd Coll. Prize.

**WILLIAMS (H.), Longley, near Gloucester.**

- 1863. 1st Year Student, 2nd Coll. Prize.
- 1869. 2nd Year Student, 3rd Coll. Prize.

**WILLIAMS (J.), Westerleigh, Bristol.**

- 1855. 1st Year Student, Scholarship; Midwifery Prize; Botany, Prize; Chemistry, Hon. Cert.; Descriptive Anatomy, Prize; Materia Medica, Hon. Cert.
- 1856. 2nd Year Student, Treas. 1st Prize.
- 1857. 3rd Year Student, Hon. Cert.; General Proficiency, Treasurer's Medal.

**WILLIAMS (J.), Doncaster.**

- 1858. 1st Year Student, Hon. Cert.
- 1859. 2nd Year Student, Hon. Cert.; Clinical Medicine, Prize.
- 1860. 3rd Year Student, Hon. Cert.

**WILLIAMS (P. H.), Monmouth.**

- s 1872. 1st Year Student, Hon. Cert.

**WILLIAMS (P. M. G.), Newcastle Emlyn.**

- 1864. Practical Midwifery, Prize.

**WILLIAMS (R. M.), Beaumaris.**

- 1880. 1st Entrance Science Scholarship.

\* Surgeon to Queen's Hospital, and Professor of Clinical Surgery at Queen's College, Birmingham.

† One of H. M. Commissioners in Lunacy, late Resident Physician to Bethlehem Royal Hospital; late Lecturer on Mental Diseases at St. Thomas's Hospital.

**WILLIAMS (W. R.),† Nottingham.**

- 1856. Matriculation Examination — Classics, Mathematics, Hon. Cert.

**WILLIAMSON (R. J.), Ripon.**

- w 1876-7. 1st Entrance Sc. Scholarship.

**WITHERBY (W. H.), Croydon.**

- 1858. Matriculation Examination in Modern Languages, Prize.

**WOAKES (E.), Luton, Beds.**

- 1856. 1st Year Student, Hon. Cert.
- 1857. 2nd Year Student, 2nd Prize; Clinical Medical Prize.
- 1858. Essay on Neuralgia, Mr. N. Smith's Prize; Surgical and Medical Anatomy, Cheselden Medal.

**WOOD (G. J.), London.**

- 1863. Descriptive Anatomy, Hon. Cert.

**WOOD (R. H.), Loughborough, Leicester.**

- 1854. Descriptive Anatomy, Hon. Cert.
- 1855. Surgery, Hon. Cert.; Midwifery, Prize; Medicine, Hon. Cert.; Descriptive Anatomy, Prize; Physiology, Hon. Cert.
- 1856. Physical Society's Essay, Prize.

**WOODHOUSE (T. J.), London.**

- 1855. Chemistry, Hon. Cert.; Materia Medica, Hon. Cert.

**WOODMAN (W. E.), Camberwell.**

- s 1875. 1st Year Student, 2nd Coll. Prize.

**WOTTON (H. G.)**

- 1855. Midwifery, Hon. Cert.
- 1856. Midwifery, Hon. Cert.

**WRENCH (E. M.), Cornhill.**

- 1851. Descriptive Anatomy, Hon. Cert.; Physical Society's Essay, Treasurer's 1st Year's Prize;
- 1852. Physiology, Hon. Cert.

**WYMAN (W. S.), Kettering, Northampton.**

- 1852. Matriculation Examination Scholarship.

All old Students of St. Thomas's Hospital are requested to send their *present* addresses to Dr. GILLESPIE, *St. Thomas's Hospital, Albert Embankment, Westminster Bridge, S.E.*



LONDON:  
PRINTED BY WILLIAM CLOWES AND SONS, LIMITED,  
STAMFORD STREET AND CHARING CROSS.





